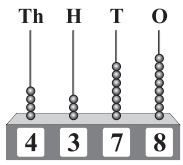
Unit One : Looking Back

1. Draw beads to represent the numbers given in the boxes :

Ans. a.



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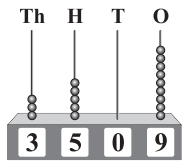

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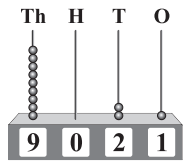


2. Write the number name :

Ans.
a. 3,429 = **Three thousand four hundred twenty-nine.**
b. 8,309 = **Eight thousand three hundred nine.**
c. 15,016 = **Fifteen thousand sixteen.**
d. 16,819 = **Sixteen thousand eight hundred nineteen.**
e. 8976 = **Eight thousand nine hundred seventy-six.**
f. 4208 = **Four thousand two hundred eight.**
g. 1637 = **One thousand six hundred thirty-seven.**

3. Write the place value and face value of each circled digit of the given numbers :

Ans.

Number	Place value	Face value
⑨761	**9000**	**9**
2⓪83	**0**	**0**
398⑥	**6**	**6**
94④2	**40**	**4**

Number	Place value	Face value
18⑧5	**80**	**8**
39⓪7	**0**	**0**
7⑦97	**700**	**7**
④350	**4000**	**4**

4. Put > or < :

Ans.
a. 6,348 > 634
b. 4937 < 4959
c. 6,182 < 6,281
d. 6,667 < 6,676
e. 9,021 < 9,640
f. 1,200 > 810
g. 2304 < 2430
h. 1607 > 1507
i. 9875 > 9872

5. Match the following :

Ans.
a. 10 more than 7285 → iii. 7295
b. 1 less than 6000 → iv. 5999
c. 4 more than 3096 → ii. 3100
d. 100 less than 3175 → vi. 3075
e. 1000 more than 5893 → i. 6893
f. 1000 less than 6940 → v. 5940

6. Add or subtract the following :

Ans. a.

Th	H	T	O
4	6	8	4
+ 2	6	4	6
7	**3**	**3**	**0**

b.

Th	H	T	O
7	9	4	1
+ 1	4	1	0
9	**3**	**5**	**1**

c.

Th	H	T	O
6	6	5	8
+ 4	6	3	2
1 1	**2**	**9**	**0**

d.

Th	H	T	O
6	3	4	8
– 1	6	8	2
4	**6**	**6**	**6**

e.

Th	H	T	O
9	3	6	8
– 6	3	6	3
3	**0**	**0**	**5**

f.

Th	H	T	O
8	6	9	4
– 8	0	8	0
	6	**1**	**4**

7. Multiply the following :

Ans. a.

H	T	O
3	5	6
	×	2
7	**1**	**2**

b.

H	T	O
	7	5
	×	1	2
	1	**5**	**0**
+	7	5	0
	9	**0**	**0**

c.

H	T	O
	3	7	6
	×	2	5
1	**8**	**8**	**0**
+ 7	5	2	0
9	**4**	**0**	**0**

d.

H	T	O
	8	0	3
	×	1	6
	4	**8**	**1**	**8**
+	8	0	3	0
1	**2**	**8**	**4**	**8**

8. Find the quotient and remainder :

Ans. a.

156
4) 624 (
– 4
22
– 20
24
– 24
0

Q = **156**
R = **0**

b.

942
4) 3768 (
– 36
16
– 16
8
– 8
0

Q = **942**
R = **0**

c.

142
7) 995 (
– 7
29
28
– 15
– 14
1

Q = **142**
R = **1**

d.

133
10) 1333 (
– 10
33
– 30
33
– 30
3

Q = **133**
R = **3**

9. Add or subtract :

Ans. a.

m	cm
14	28
+ 18	63
32	**91**

b.

kg	g
78	910
+ 70	411
149	**321**

c.

l	ml
40	718
+ 68	129
108	**847**

d.

m	cm
94	46
– 19	94
74	**52**

e.

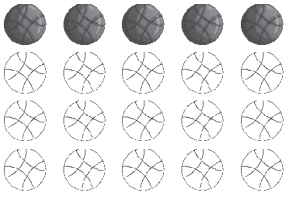
kg	g
640	059
– 580	907
59	**152**

f.

l	ml
65	819
– 20	136
45	**683**

10. Which fraction to the following collection represent.
Tick (✓) the correct answer :

Ans. a.

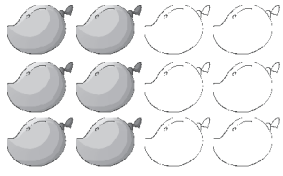


i. $\frac{1}{2}$ of 20 ☐

ii. $\frac{1}{5}$ of 20 ☐

iii. $\frac{1}{4}$ of 20 ✓

b.

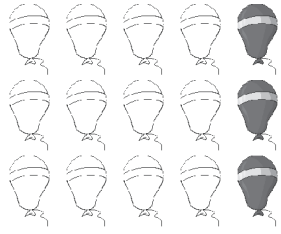


i. $\frac{1}{2}$ of 12 ✓

ii. $\frac{1}{3}$ of 12 ☐

iii. $\frac{1}{4}$ of 12 ☐

c.



i. $\frac{1}{3}$ of 15 ☐

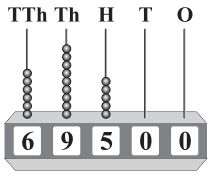
ii. $\frac{1}{5}$ of 15 ✓

iii. $\frac{1}{15}$ of 15 ☐

Exercise 2.1

1. Count the beads and write the number :

Ans. a.



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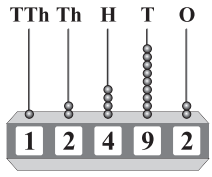

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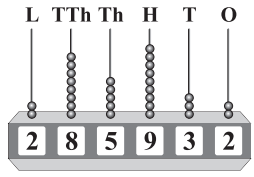

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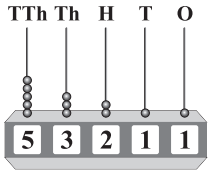

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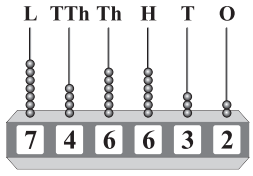

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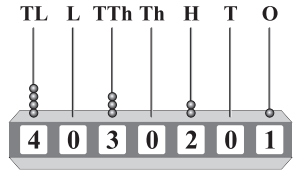
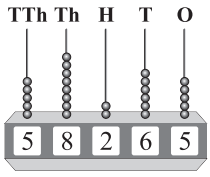


2. Represent the following numbers on the abacus and write their names :

Ans. a.



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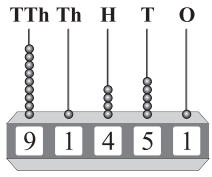

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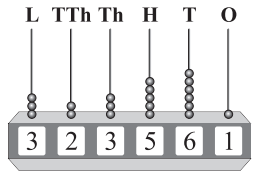

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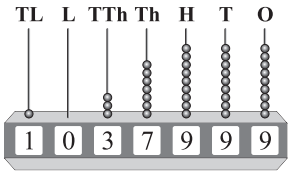

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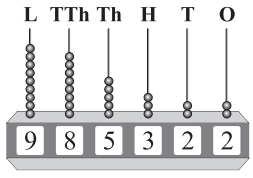

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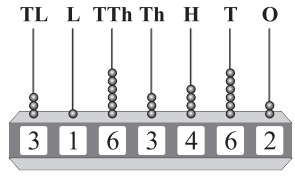


Exercise 2.2

1. Write the number names according to Indian system :

Ans.

a. 25,399 = **Twenty-five thousand three hundred ninety-nine.**

b. 69,452 = **Sixty-nine thousand four hundred fifty-two.**

c. 1,80,065 = **One lakh eighty thousand sixty-five.**

d. 6,73,900 = **Six lakh seventy-three thousand nine hundred.**

e. 8,22,155 = **Eight lakh twenty-two thousand one hundred fifty-five.**

f. 19,76,222 = **Nineteen lakh seventy-six two hundred twenty-two.**

g. 6,75,473 = **Six lakh seventy-five thousand four hundred seventy-three.**

h. 45,900 = **Forty-five thousand nine hundred.**

i. 1,98,103 = **One lakh ninety-eight one hundred three.**

j. 11,89,763 = **Eleven lakh eighty-nine thousand seven hundred sixty-three.**

2. Arrange the following numbers in the place value chart.

Ans.

S. No.	Number	TL	L	TTh	Th	H	T	O
a.	45,432			40000	5000	400	30	2
b.	35,401			30000	5000	400	00	1

c.	3,25,935		300000	20000	5000	900	30	5
d.	1,20,031		100000	20000	0000	000	30	1
e.	8,76,317		800000	70000	6000	300	10	7
f.	7,05,199		700000	00000	5000	100	90	9
g.	19,17,001	1000000	900000	10000	7000	000	00	1

3. Write the numerals of each :

Ans.

a. Four lakh forty-four thousand nine **4,44,009**
b. Ninety-five thousand six hundred nine **95,609**
c. Seven lakh eight thousand fifty-six **7,08,056**
d. Sixty-two thousand **62,000**
e. Nine lakh thirty-nine thousand two hundred fifty-five **9,39,255**
f. Sixteen lakh fifteen thousand four **16,15,004**
g. Ninety lakh two thousand eight hundred ninety-two **9,02,892**
h. Five lakh ninety-five **5,00,095**

Exercise 2.3

1. Mark the period by placing the commas and write the period, place, place value and the face value of the coloured digit.

Ans.

		Period	Place	Place value	Face value
a.	8,74,531	Thousands	Thousands	4 × 1000 = 4000	4
b.	3,79,431	Lakhs	Lakhs	3 × 100000 = 300000	3
c.	2,53,091	Ones	Hundreds	0 × 100 = 0	0
d.	8,75,109	Lakhs	Lakhs	8 × 100000 = 800000	8
e.	59,515	Thousands	Thousands	5 × 10000 = 50,000	5
f.	4,00,510	Ones	hundreds	5 × 100	5
g.	5,087,609	Lakhs	Lakhs	5 × 1000000 = 5000000	5
h.	34,70,910	Lakhs	Lakhs	4 × 100000 = 400000	4

2. Write the place value of each digit in the given numbers.

Ans. a.

TTh	**Th**	**H**	**T**	**O**
2	9	7	4	5

5 is in the ones place = 5 ones = 5
4 is in the tens place = 4 tens = 40
7 is in the hundreds place = 7 hundreds = 700
8 is in the thousands place = 8 thousands = 8000
2 is in the ten thousands place = 2 ten thousands = 20000

b.

TTh	**Th**	**H**	**T**	**O**
3	0	4	5	8

8 is in the ones place = 8 ones = 8
5 is in the tens place = 5 tens = 50
4 is in the hundreds place = 4 hundreds = 400
0 is in the thousands place = 0 thousands = 0
3 is in the ten thousands place = 2 ten thousands = 30000

c.

L	TTh	Th	H	T	O
6	4	9	2	7	0

0 is in the ones place = 0 ones = 0
7 is in the tens place = 7 tens = 70
2 is in the hundreds place = 2 hundreds = 200
9 is in the thousands place = 9 thousands = 9000
4 is in the ten thousands place = 4 ten thousands = 40000
6 is in the lakhs place = 6 lakh = 600000

d.

TTh	Th	H	T	O
7	6	5	4	2

2 is in the ones place = 2 ones = 2
4 is in the tens place = 4 tens = 40
5 is in the hundreds place = 5 hundreds = 500
6 is in the thousands place = 6 thousands = 6000
7 is in the ten thousands place = 7 ten thousands = 70000

e.

TTh	Th	H	T	O
8	9	7	4	6

6 is in the ones place = 6 ones = 6
4 is in the tens place = 4 tens = 40
7 is in the hundreds place = 7 hundreds = 700
9 is in the thousands place = 9 thousands = 9000
8 is in the ten thousands place = 8 ten thousands = 80000

f.

L	TTh	Th	H	T	O
3	0	8	4	9	1

1 is in the ones place = 1 one = 1
9 is in the tens place = 9 tens = 90
4 is in the hundreds place = 4 hundreds = 400
8 is in the thousands place = 8 thousands = 8000
0 is in the ten thousands place = 0 ten thousands = 0
3 is in the lakhs place = 3 lakhs = 300000

Mental Maths

State true of false.

Ans. 1. False 2. True 3. False 4. False

Exercise 2.4

1. Write the following numbers in the expanded form :

Ans.

	Number	Expanded form
a.	2,87,943	2,00,000 + 80,000 + 7,000 + 900 + 40 + 3
b.	6,92,898	600000 + 90000 + 2000 + 800 + 90 + 8
c.	7,06,246	700000 + 6000 + 200 + 40 + 6
d.	69,29,698	6000000 + 900000 + 20000 + 9000 + 600 + 90 + 8
e.	4,35,832	400000 + 30000 + 5000 + 800 + 30 + 2
f.	9,23,456	900000 + 20000 + 3000 + 400 + 50 + 6
g.	49,37,510	4000000 + 900000 + 30000 + 7000 + 500 + 10
h.	30,94,105	3000000 + 90000 + 4000 + 100 + 5

2. Write the short form of the following :

Ans. a. 9,00,000 + 6,000 + 300 + 40 + 8 = **9,06,348**

b. 8,00,000 + 60,000 + 3,000 + 400 + 90 + 7 = **8,63,497**

c. 30,000 + 2,000 + 600 + 10 + 9 = **32,619**

d. 60,000 + 7,000 + 100 + 80 + 1 = **67,181**

f. 7,00,000 + 900 + 70 = **7,00,970**

3. Fill in the blanks :

Ans. a. 6,00,000 + **10000** + 4,000 + 900 + 20 + 6 = 6,14,926

b. **90000** + 4,000 + 800 + 90 + 1 = 94,891

c. **600000** + 30,000 + 900 + 20 + 4 = 630,924

d. 80,000 + 600 + 40 + 1 = **80,641**

e. **4** thousands 3 hundreds 9 tens 8 ones = 4,398

Exercise 2.5

1. Write down the successor of the following numbers.

Ans. a. Successor of 646556 = 646556 + 1 = 646557

b. Successor of 6497605 = 6497605 + 1 = 6497606

c. Successor of 1092997 = 1092997 + 1 = 1092998

d. Successor of 7210109 = 7210109 + 1 = 7210110

2. Write down the predecessor of the following numbers.

Ans. a. Predecessor of 694500 = 694500 – 1 = 694499

b. Predecessor of 3246310 = 3246310 – 1 = 3246309

c. Predecessor of 9040101 = 9040101 – 1 = 9040100

d. Predecessor of 6321900 = 6321900 – 1 = 6321899

Exercise 2.6

1. Insert >, < or = :

Ans. a. 1,30,150 < 13,33,000 b. 7,00,000 > 4,35,671 c. 73,201 < 73,300

d. 50,448 < 60,000 e. 6,51,614 < 6,71,614 f. 5,95,920 < 7,10,010

2. Arrange the following numbers in ascending order :

Ans. To arrange the numbers in ascending order, we first the smallest number, then the next smaller number and so on.

a. **40,993, 40,999, 39,003 and 17902**

Given numbers when arranged in ascending order are : 17902 < 39003 < 40993 < 40999

b. **81106, 21107, 56799 and 18109**

Given numbers when arranged in ascending order are : 18109 < 21107 < 56799 < 81106

c. **142002, 502101, 130311 and 122311**

Given numbers when arranged in ascending order are : 122311 < 130311 < 142002 < 502101

d. **343432, 382388, 443382 and 231184**

Given numbers when arranged in ascending order are : 231184 < 343432 < 38238 < 443382

e. **762492, 767328, 922739 and 832797**

Given numbers when arranged in ascending order are : 762492 < 767328 < 832797 < 922739

f. **618542, 62542, 61386 and 6161**

Given numbers when arranged in ascending order are : 6161 < 61386 < 62542 < 618542

3. Arrange the following numbers in descending order :

Ans. To arrange the numbers in descending order, first write the largest number, then the next larger number and so on.

a. **72310, 72086, 72238 and 72388**
Given numbers when arranged in descending order are : 72388 > 72310 > 72238 > 72086

b. **768771, 707801, 107860 and 116581**
Given numbers when arranged in descending order are : 768771 < 707801 > 116581 > 10786

c. **800987, 760866, 667790 and 980776**
Given numbers when arranged in descending order are : 980776 > 800987 > 760866 > 667790

d. **65023, 652033, 323216 and 6542**
Given numbers when arranged in descending order are : 652033 > 323216 > 65023 > 6542

e. **63311, 12543, 63155 and 63125**
Given numbers when arranged in descending order are : 63311 > 63155 > 63125 > 12543

f. **441552, 44175, 44156 and 440765**
Given numbers when arranged in descending order are : 441552 < 440765 > 44156 > 44175

Mental Maths

Write the greatest and the smallest 4-digit numbers.

Ans. a. The greatest 4-digit number = 9999 The smallest 4-digit number = 1111
b. The greatest 4-digit number = 9876 The smallest 4-digit number = 6789
c. The greatest 4-digit number = 4422 The smallest 4-digit number = 2244
d. The greatest 4-digit number = 9730 The smallest 4-digit number = 3079

Exercise 2.7

1. Write the smallest and greatest 5-digit number using each of the following digits only once.

Ans.

S. No.	Digits	Smallest	Greatest
a.	4, 3, 2, 9, 5	23459	95432
b.	1, 3, 7, 0, 6	10367	76310
c.	5, 9, 3, 1, 7	13579	97531
d.	2, 8, 0, 9, 3	20389	98320
e.	7, 8, 6, 2, 0	20678	87620

2. Write the smallest and greatest 6-digit number using each of the following digits, repeating 4 twice.

Ans.

S. No.	Digits	Smallest	Greatest
a.	9, 3, 4, 5, 1	134459	954431
b.	3, 4, 8, 0, 6	304468	864430
c.	1, 4, 2, 5, 7	124457	754421
d.	0, 9, 3, 7, 4	304479	974430

3. Form the numbers :

Ans. a. 9,77,430 b. 9,96,310 c. 1,25,679 d. 10,678

Exercise 2.8

1. Round off the following numbers to the nearest 10.

Ans. a. **26,571**
The digit on the right of tens digit is 1 which is smaller than 5. So, 26571 rounded off to the nearest ten is 26570.

b. **24,5<u>8</u>9**

The digit on the right of tens digit is 9 which is greater than 5. So, 24589 rounded off to the nearest ten is 24590.

c. **1,45,7<u>8</u>5**

The digit on the right of tens digit is 5 which is equal to 5. So, 145785 rounded off to the nearest ten is 145790.

d. **5,35,7<u>8</u>3**

The digit on the right of tens digit is 3 which is smaller than 5. So, 535783 rounded off to the nearest ten is 535780.

e. **236<u>7</u>8**

The digit on the right of tens digit is 8 which is greater than 5. So, 23678 rounded off to the nearest ten is 23680.

f. **3,65,9<u>2</u>9**

The digit on the right of tens digit is 9 which is greater than 5. So, 365929 rounded off to the nearest ten is 365930.

2. Round off the following numbers to the nearest 100.

Ans. a. **13<u>4</u>78**

The digit on the right of hundreds digit is 7 which is greater than 5. So, 13478 rounded off to the nearest hundred is 13500.

b. **25<u>5</u>95**

The digit on the right of hundreds digit is 9 which is greater than 5. So, 25595 rounded off to the nearest hundred is 25600.

c. **18<u>5</u>66**

The digit on the right of hundreds digit is 6 which is greater than 5. So, 18566 rounded off to the nearest hundred is 18600.

d. **345<u>2</u>38**

The digit on the right of hundreds digit is 3 which is smaller than 5. So, 345238 rounded off to the nearest hundred is 345200.

e. **623<u>5</u>67**

The digit on the right of hundreds digit is 6 which is greater than 5. So, 263567 rounded off to the nearest hundred is 623600.

f. **795<u>3</u>25**

The digit on the right of hundreds digit is 2 which is smaller than 5. So, 795325 rounded off to the nearest hundred is 795300.

3. Round off the following numbers to the nearest 1000.

Ans. a. **2<u>3</u>,678**

The digit on the right of thousands digit is 6 which is greater than 5. So, 23678 rounded off to the nearest thousand is 24000.

b. **1<u>0</u>,945**

The digit on the right of thousands digit is 9 which is greater than 5. So, 10945 rounded off to the nearest thousand is 11000.

c. **<u>2</u><u>8</u>,196**

The digit on the right of thousands digit is 1 which is smaller than 5. So, 28196 rounded off to the nearest thousand is 28000.

d. **1,<u>2</u><u>5</u>,569**

The digit on the right of thousands digit is 5 which is equal to 5. So, 125569 rounded off to the nearest thousand is 126000.

e. **89<u>2</u>368**

The digit on the right of thousands digit is 3 which is smaller than 5. So, 892363 rounded off the nearest thousand is 892000.

f. **269565**

The digit on the right of thousands digit is 5 which is equal to 5. So, 269565 rounded off the nearest thousand is 270000.

Let's Review

1. Tick (✓) the correct choice :

Ans. a. i. b. iii. c. iii. d. i.

2. Write the number names of :

Ans. a. **3,52,179** = Three lakh fifty-two thousand one hundred seventy-nine.

b. **45,16,201** = Forty-five lakh sixteen thousand two hundred one.

3. Write the numeral of the following names :

Ans. a. Twenty thousand four hundred one = **20,401**

b. Two lakh eighty-four thousand nine hundred six = **2,84,906**

4. Compare the following using > or < sign :

Ans. a. 82,765 > 54,319 b. 9,38,708 > 9,38,705

c. 8,56,426 > 5,86,462 d. 79,300 < 79,399

Unit Three : Roman Numerals

Exercise 3

1. Write the value for each of these numbers in Roman numerals :

Ans. a. 40 = **XL** b. 131 = **CXXXI** c. 236 = **CCXXXVI**

d. 16 = **XVI** e. 219 = **CCXIX** f. 14 = **XIV**

g. 28 = **XXVIII** h. 439 = **CDXXXIX** i. 100 = **C**

j. 500 = **D** k. 690 = **DCXC** l. 750 = **DCCL**

2. Write the numeral before and after :

Ans. a. **LXXIX** LXXX **LXXXI** b. **DXII** DXIII **DXIV** c. **CXIX** CXX **CXXI**

d. **CXVIII** CXIX **CXX** e. **XLVII** XLVIII **XLIX** f. **XXI** XXII **XXIII**

g. **XXX** XXXI **XXXII** h. **XVI** XVII **XIX** i. **XCVI** XCVII **XCVIII**

j. **LXXIII** LXXIV **LXXV**

3. Fill in the blanks :

Ans. a. V + IV = **IX** b. XX – IX = **XI** c. IX – III = **VI**

d. L – IV = **XLVI** e. VII + V = **XII** f. IX + VIII = **XVII**

g. IX – IV= **V** h. XXX – VII = **XXIII** i. L – X = **XL**

4. Fill in the boxes with >, < or = :

Ans. a. XXII = 22 b. 27 < XXXIV c. XIX = 19

d. 40 < C e. 135 > LXXXV f. 37 > XXIX

Mental Maths

Rewrite the following sentences of Rohan by changing the Hindu-Arabic numerals to Roman numerals.

Ans. a. XLII b. XXIX c. IX d. XXVII

Let's Review

1. Tick (✓) the correct choice :

Ans. a. iii b. iii c. ii d. ii e. i

Exercise 4.1

1. Add :

Ans. a.

	TTh	Th	H	T	O
	2	5	4	4	6
+	4	2	5	3	3
	6	**7**	**9**	**7**	**9**

b.

	TTh	Th	H	T	O
	6	5	6	3	4
+	2	4	2	5	5
	8	**9**	**8**	**8**	**9**

c.

	TTh	Th	H	T	O
	8	6	7	0	3
+	1	3	2	8	6
	9	**9**	**9**	**8**	**9**

d.

	TTh	Th	H	T	O
	6	3	4	1	4
+	1	6	2	5	2
	7	**9**	**6**	**6**	**6**

e.

	TTh	Th	H	T	O
	1	3	5	4	4
+	3	3	1	3	0
	4	**6**	**6**	**7**	**4**

f.

	L	TTh	Th	H	T	O
	5	1	0	3	5	4
+	3	3	3	0	1	2
	8	**4**	**3**	**3**	**6**	**6**

g.

	L	TTh	Th	H	T	O
	4	6	4	2	3	2
	3	0	2	1	2	2
+	1	0	1	6	3	4
	8	**6**	**7**	**9**	**8**	**8**

h.

	TTh	Th	H	T	O
	5	1	6	1	1
	1	0	1	5	6
+	2	2	0	1	1
	8	**3**	**7**	**7**	**8**

i.

	L	TTh	Th	H	T	O
	6	4	2	6	0	0
		3	5	2	3	4
+		1	1	1	4	5
	6	**8**	**8**	**9**	**7**	**9**

j.

	L	TTh	Th	H	T	O
	4	1	1	6	5	7
		5	7	2	1	0
	1	2	0	1	2	1
+	7	1	1	0	1	0
	1	**2**	**9**	**9**	**9**	**9**	**8**

k.

	L	TTh	Th	H	T	O
	2	4	2	1	1	1
			2	1	2	4
	4	0	3	0	4	1
+	2	2	0	6	1	2
	8	**6**	**7**	**8**	**8**	**8**

l.

	L	TTh	Th	H	T	O
	3	1	1	1	2	5
	1	0	0	2	3	1
	2	5	5	1	0	0
+		1	0	3	1	2
	6	**7**	**6**	**7**	**6**	**8**

2. Arrange in columns and add :

Ans. a.

	TTh	Th	H	T	O
	2	6	2	1	6
+	1	3	6	8	2
	3	**9**	**8**	**9**	**8**

b.

	L	TTh	Th	H	T	O
				2	1	3
		7	0	2	4	1
+	4	2	5	1	3	2
	4	**9**	**5**	**5**	**8**	**6**

c.

	L	TTh	Th	H	T	O
	1	6	5	6	1	0
	4	3	1	0	5	4
+			2	1	0	2
	5	**9**	**8**	**7**	**6**	**6**

d.

	L	TTh	Th	H	T	O
		1	4	3	7	1
		2	2	2	0	4
+	1	1	1	1	1	0
	1	**4**	**7**	**6**	**8**	**5**

Exercise 4.2

1. Add the following :

Ans. a.

	TTh	Th	H	T	O
	7	3	4	7	8
+	1	1	4	6	9
	8	**4**	**9**	**4**	**7**

b.

	TTh	Th	H	T	O
	8	7	6	5	3
+	1	2	2	9	3
	9	**9**	**9**	**4**	**6**

c.

	TTh	Th	H	T	O
	6	6	3	5	6
+	2	3	2	5	4
	8	**9**	**6**	**1**	**0**

d.

	L	TTh	Th	H	T	O
	3	6	8	1	1	5
+		1	2	3	4	5
	3	**8**	**0**	**4**	**6**	**0**

e.

	L	TTh	Th	H	T	O
	6	3	9	4	4	8
+	2	4	1	7	9	7
	8	**8**	**1**	**2**	**4**	**5**

f.

	L	TTh	Th	H	T	O
	3	2	1	5	7	6
+		4	5	1	9	9
	3	**6**	**6**	**7**	**7**	**5**

g.

	TTh	Th	H	T	O
	3	1	2	5	7
+	3	1	7	9	4
	6	**3**	**0**	**5**	**1**

h.

	L	TTh	Th	H	T	O
	8	8	7	6	5	0
+		1	0	1	1	5
	8	**9**	**7**	**7**	**6**	**5**

i.

	L	TTh	Th	H	T	O
	1	2	3	5	7	1
+	2	1	4	6	1	1
	3	**3**	**8**	**1**	**8**	**2**

2. Add :

Ans. a.

	TTh	Th	H	T	O
	1	1		1	
	2	8	3	1	8
+		6	7	4	3
	3	**5**	**0**	**6**	**1**

b.

	L	TTh	Th	H	T	O
		1				
		1	7	8	5	0
+	9	3	5	1	4	2
	9	**5**	**2**	**9**	**9**	**2**

c.

	L	TTh	Th	H	T	O
	3	3	3	5	0	2
+	2	6	4	3	9	7
	5	**9**	**7**	**8**	**9**	**9**

d.

	L	TTh	Th	H	T	O
	1		1	1		
	2	6	1	9	8	7
+	2	5	2	4	2	1
	5	**1**	**4**	**4**	**0**	**8**

Exercise 4.3

1. Add :

Ans. a.

	TTh	Th	H	T	O
	4	6	9	3	2
+	1	9	3	0	7
+		4	3	5	9
	7	**0**	**5**	**9**	**8**

b.

	TTh	Th	H	T	O
	5	6	7	0	9
+		4	7	8	9
+		3	2	1	9
	4	**4**	**7**	**1**	**7**

c.

	TTh	Th	H	T	O
	1	9	2	7	4
+	2	4	3	4	8
+	2	2	4	3	6
	6	**6**	**0**	**5**	**8**

d.

	TTh	Th	H	T	O
	3	6	4	0	8
+	1	9	7	2	7
+	1	7	4	2	0
	7	**3**	**5**	**5**	**5**

e.

	L	TTh	Th	H	T	O
	3	4	5	4	6	4
+	2	3	2	5	3	8
+	1	4	5	2	0	9
	7	**2**	**3**	**2**	**1**	**1**

f.

	L	TTh	Th	H	T	O
	6	1	2	3	6	2
+	2	3	9	5	1	8
+		4	3	9	1	1
	8	**9**	**5**	**7**	**9**	**1**

g.

	L	TTh	Th	H	T	O
	3	4	8	1	0	8
+	2	3	6	9	9	2
+	2	4	2	2	1	0
	8	**2**	**7**	**3**	**1**	**0**

h.

	L	TTh	Th	H	T	O
	5	3	6	4	8	4
+		7	6	5	2	5
+		6	0	3	2	0
	6	**7**	**3**	**3**	**2**	**9**

i.

	L	TTh	Th	H	T	O
		6	4	8	7	0	3
+		1	1	2	4	9	9
+			2	8	3	0	0
+		2	1	6	7	0	2
	1	**0**	**0**	**6**	**2**	**0**	**4**

j.

	L	TTh	Th	H	T	O
		6	4	9	9	8
+	2	3	3	8	0	3
+			2	6	4	5
+	3	1	2	0	0	0
	6	**1**	**3**	**4**	**4**	**6**

k.

	L	TTh	Th	H	T	O
	5	1	8	4	7	8
+	2	1	6	3	2	4
+		1	5	5	1	6
+	1	1	0	8	0	0
	8	**6**	**1**	**1**	**1**	**8**

l.

	L	TTh	Th	H	T	O
		3	0	0	0	6
+				8	4	9
+					1	7
+	5	4	2	2	6	8
	5	**7**	**3**	**1**	**4**	**0**

2. Add :

Ans. a.

	TTh	Th	H	T	O
	(1)	(1)	(1)	(2)	
			2	5	9
		2	5	6	9
	1	8	7	2	0
+	3	2	3	4	3
	5	**3**	**8**	**9**	**1**

b.

	L	TTh	Th	H	T	O
	(1)	(2)	(1)	(1)	(1)	
	3	2	6	5	3	2
	5	3	8	4	9	5
+		5	6	4	3	4
	9	**2**	**1**	**4**	**6**	**1**

c.

	TTh	Th	H	T	O
	(1)	(1)	(2)	(2)	
		3	7	8	5
			1	0	8
		4	7	8	9
+	1	5	0	6	4
	2	**3**	**7**	**4**	**6**

d.

	L	TTh	Th	H	T	O
	(1)	(1)			(1)	
	4	3	8	1	0	2
		4	2	3	2	4
+	2	5	4	1	2	6
	7	**3**	**4**	**5**	**5**	**2**

e.

	TTh	Th	H	T	O
	(1)	(2)	(1)	(2)	
	2	1	9	8	7
				5	6
		1	8	3	2
+	5	9	9	0	9
	8	**3**	**7**	**8**	**4**

f.

	L	TTh	Th	H	T	O
		(1)	(1)	(1)	(1)	
	5	2	6	5	3	2
	3	2	6	0	6	4
+	3	1	2	5	6	5
	1	**1**	**6**	**5**	**1**	**6**	**1**

g.

	TTh	Th	H	T	O
			(3)	(2)	
	3	8	0	3	2
	1	9	2	8	0
		4	0	8	9
+			1	9	9
	6	**1**	**6**	**0**	**0**

h.

	L	TTh	Th	H	T	O
	3	3	6	4	9	2
	4	5	2	0	7	8
+			5	6	5	6
	7	**9**	**4**	**2**	**2**	**6**

i.

	TTh	Th	H	T	O
	2	3	1	2	4
		1	8	9	2
			4	3	5
+	2	3	0	6	2
	4	**8**	**5**	**1**	**3**

j.

	L	TTh	Th	H	T	O
		(1)	(2)	(1)	(1)	
			5	8	7	3
	6	4	6	7	0	7
+		3	6	4	2	9
	6	**8**	**9**	**0**	**0**	**9**

k.

	TTh	Th	H	T	O
	(1)	(1)	(3)	(2)	
		1	0	9	6
	2	3	4	6	5
			9	7	8
+	2	7	3	6	2
	5	**2**	**9**	**0**	**1**

l.

	TL	L	TTh	Th	H	T	O
		(1)	(1)	(1)	(1)	(1)	
	4	3	5	6	3	4	5
		4	2	4	5	6	7
+			6	3	4	5	6
	4	8	4	4	3	6	8

Exercise 4.4

1. Fill in the blanks :

Ans. a. 25,817 + 12,352 = **12352** + 25,817

b. 7,52,810 + 1 = **752811**

c. 0 + **1,28,111** = 1,28,111

d. 2,51,071 + (31,271 + 12,000) = (**251,071** + 31,271) + 12,000

e. 32,81,00 + 12,653 = 12,653 + **328100**

f. 76,493 + **0** = 76,493

g. **539611** + 0 = 5,39,611

2. Add the following using the grouping property :

Ans. a. **17068 + 4321 + 59632**
= (17068 + 4321) + 5932
= 21389 + 5932 = 27321

b. **8521 + 1009 + 322786**
= (8521 + 1009) + 322786
= 9530 + 322786 = 332316

c. **264789 + 2431 + 111080**
= (264789 + 2431) + 111080
= 267220 + 111080 = 378300

d. **213481 + 3102 + 12698**
= (213481 + 3102) + 12698
= 216583 + 12698 = 229281

e. **5912 + 326375 + 71125**
= 5912 + (326375 + 71125)
= 5912 + 397500 = 403412

f. **7496 + 71234 + 5076**
= 7496 + (71234 + 5076)
= 7496 + 76310 = 83806

Exercise 4.5

1. Solve and identify the minuend, subtrahend and the difference :

Ans.

S. No.		Minuend	Subtrahend	Difference
a.	57,487 – 26,312	57487	26312	31175
b.	68,716 – 32,405	68,716	32,405	36311
c.	9,28,492 – 7,16,432	928492	716432	212060
d.	6,45,269 – 3,10,123	645269	310123	335146

2. Subtract :

Ans.

a.

	TTh	Th	H	T	O
	8	7	7	3	4
–	5	3	2	1	1
	3	**4**	**5**	**2**	**3**

b.

	TTh	Th	H	T	O
	4	8	9	7	6
–	1	7	4	3	2
	3	**1**	**5**	**4**	**4**

c.

	TTh	Th	H	T	O
	7	6	5	3	1
–	4	2	1	3	0
	3	**4**	**4**	**0**	**1**

d.

	L	TTh	Th	H	T	O
	3	4	9	6	7	8
–	2	1	6	4	5	3
	1	**3**	**3**	**2**	**2**	**5**

e.

	L	TTh	Th	H	T	O
	6	8	9	7	5	0
–	1	7	4	3	1	0
	5	**1**	**5**	**4**	**4**	**0**

f.

	L	TTh	Th	H	T	O
	8	6	1	9	3	0
–		4	1	8	1	0
	8	**2**	**0**	**1**	**2**	**0**

g.

	L	TTh	Th	H	T	O
	6	6	7	8	9	0
–	2	4	3	2	1	0
	4	**2**	**4**	**6**	**8**	**0**

h.

	L	TTh	Th	H	T	O
	4	5	9	3	7	1
–	1	2	3	3	2	1
	3	**3**	**6**	**0**	**5**	**0**

i.

	L	TTh	Th	H	T	O
	8	5	7	4	3	8
–	6	2	4	0	2	5
	2	**3**	**3**	**4**	**1**	**3**

3. Arrange in columns and subtract :

Ans.

a.

	TTh	Th	H	T	O
	8	2	5	6	9
–	4	0	2	5	4
	4	**2**	**3**	**1**	**5**

b.

	TTh	Th	H	T	O
	2	8	6	9	7
–		7	2	6	4
	2	**1**	**4**	**3**	**3**

c.

	TTh	Th	H	T	O
	9	7	4	7	8
–	8	4	0	3	2
	1	**3**	**4**	**4**	**1**

d.

	L	TTh	Th	H	T	O
	9	6	5	4	8	5
–	4	1	2	0	6	2
	5	**5**	**3**	**4**	**2**	**3**

e.

	L	TTh	Th	H	T	O
	7	3	7	9	5	6
–	6	1	2	5	2	4
	1	**2**	**5**	**4**	**3**	**2**

f.

	L	TTh	Th	H	T	O
	9	0	8	5	6	4
–	6	0	2	3	2	0
	3	**0**	**6**	**2**	**4**	**4**

Exercise 4.6

1. Subtract :

Ans.

a.

	TTh	Th	H	T	O
	2	5	1	4	8
–	2	4	6	9	3
			4	**5**	**5**

b.

	TTh	Th	H	T	O
	5	4	2	0	3
–	1	2	1	4	5
	4	**2**	**0**	**5**	**8**

c.

	TTh	Th	H	T	O
	6	1	8	5	0
–	2	4	7	7	5
	3	**7**	**0**	**7**	**5**

d.

	L	TTh	Th	H	T	O
	4	3	8	5	8	1
–	2	9	8	4	9	5
	1	**4**	**0**	**0**	**8**	**6**

e.

	L	TTh	Th	H	T	O
	4	7	2	0	1	0
–	3	7	1	3	9	5
	1	**0**	**0**	**6**	**1**	**5**

f.

	L	TTh	Th	H	T	O
	6	0	0	8	0	1
–	2	2	6	7	0	5
	3	**7**	**4**	**0**	**9**	**6**

2. Arrange in columns and subtract. Check the answers you get :

Ans. a.

	TTh	Th	H	T	O
	9	1	0	3	4
–	1	6	0	1	1
	7	**5**	**0**	**2**	**3**

Check :

	TTh	Th	H	T	O
	7	5	0	2	3
+	1	6	0	1	1
	9	**1**	**0**	**3**	**4**

b.

	TTh	Th	H	T	O
	2	7	0	5	0
–		1	4	2	1
	2	**5**	**6**	**2**	**9**

Check :

	TTh	Th	H	T	O
	2	5	6	2	9
+		1	4	2	1
	2	**7**	**0**	**5**	**0**

c.

	TTh	Th	H	T	O
	1	4	3	4	5
–	1	2	6	8	9
		1	**6**	**5**	**6**

Check :

	TTh	Th	H	T	O
		1	6	5	6
+	1	2	6	8	9
	1	**4**	**3**	**4**	**5**

d.

	L	TTh	Th	H	T	O
	8	2	1	4	0	6
–	4	5	8	1	0	8
	3	**6**	**3**	**2**	**9**	**8**

Check :

	L	TTh	Th	H	T	O
	3	6	3	2	9	8
+	4	5	8	1	0	8
	8	**2**	**1**	**4**	**0**	**6**

e.

	L	TTh	Th	H	T	O
	5	1	8	5	2	0
–		1	1	8	3	0
	5	**0**	**6**	**6**	**9**	**0**

Check :

	L	TTh	Th	H	T	O
	5	0	6	6	9	0
+		1	1	8	3	0
	5	**1**	**8**	**5**	**2**	**0**

f.

	L	TTh	Th	H	T	O
	4	0	0	0	0	0
–		4	8	0	0	0
	3	**5**	**2**	**0**	**0**	**0**

Check :

	L	TTh	Th	H	T	O
	3	5	2	0	0	0
+		4	8	0	0	0
	4	**0**	**0**	**0**	**0**	**0**

3. Fill in :

Ans. a. 64,238 + **3,762** = 68,000

b. 2,35,007 + **2,02,203** = 4,37,210

c. **2** + 14,999 = 15,001

d. **10,1235** + 2,98,765 = 4,00,000

e. 40,301 – **31,741** = 8,560

f. 20,000 – **16,000** = 4,000

Exercise 4.7

1. Subtract each of the following and check the answer by suitable addition :

Ans. a.

	TTh	Th	H	T	O
	8	6	8	4	1
–	5	3	0	7	4
	3	**3**	**7**	**6**	**7**

Check :

	TTh	Th	H	T	O
	3	**3**	**7**	**6**	**7**
+	5	3	0	7	4
	8	**6**	**8**	**4**	**1**

b.

	TTh	Th	H	T	O
	6	7	2	0	6
–	5	4	8	9	2
	1	**2**	**3**	**1**	**4**

Check :

	TTh	Th	H	T	O
	1	**2**	**3**	**1**	**4**
+	5	4	8	9	2
	6	**7**	**2**	**0**	**6**

2. Subtract and check the answer in your notebook :

Ans. a.

	TTh	Th	H	T	O
	5	0	8	1	7
–	1	5	2	7	3
	3	**5**	**5**	**4**	**4**

Check :

	TTh	Th	H	T	O
	3	5	5	4	4
+	1	5	2	7	3
	5	**0**	**8**	**1**	**7**

b.

	L	TTh	Th	H	T	O
	2	0	0	0	0	0
–	1	3	2	8	0	0
		6	**7**	**2**	**0**	**0**

Check :

	L	TTh	Th	H	T	O
		6	7	2	0	0
+	1	3	2	8	0	0
	2	**0**	**0**	**0**	**0**	**0**

3. Fill in the missing digits :

Ans. a.

	TTh	Th	H	T	O
	9	**4**	**7**	**7**	**0**
–	5	7	2	4	3
	3	7	5	2	7

b.

	TTh	Th	H	T	O
	7	2	9	8	7
–	5	**7**	**3**	**2**	**2**
	1	5	6	6	5

c.

	L	TTh	Th	H	T	O
	8	1	6	5	4	6
–	1	**5**	2	**5**	5	**5**
	6	6	**3**	9	**9**	1

Exercise 4.8

Ans. 1. In a city, Number of men = 56631
In a city, Number of women = 37184
So, total number of people = 56631 + 37184 = 93815
Thus, there are 93815 people in the city.

	TTh	Th	H	T	O
	5	6	6	3	1
+	3	7	1	8	4
	9	**3**	**8**	**1**	**5**

2. In 2009, A factory manufactured watches = 72584
In 2010, A factory manufactured watches = 37846
So, total number of watches = 72584 + 37846
= 110430
Thus, the factory manufactured 110430 watches in two years.

	TTh	Th	H	T	O
	7	2	5	8	4
+	3	7	8	4	6
	1	**1**	**0**	**4**	**3**	**0**

3. Sachin has made runs = 16040
Rahul has made runs = 12005
Since, 16040 > 12005
Difference between their runs = 16040 – 12005 = 4035
So, Sachin has got more runs by 4035.

	TTh	Th	H	T	O
	1	6	0	4	0
–	1	2	0	0	5
		4	**0**	**3**	**5**

4. Cost of a monitor = ₹ 10500
Cost of a printer = ₹ 25840
So, the difference between their cost = ₹ (25840 – 10500)
= ₹ 15340

	TTh	Th	H	T	O
	2	5	8	4	0
–	1	0	5	0	0
	1	**5**	**3**	**4**	**0**

5. Mr. Ratan's car cost = ₹ 556750
So, Sunny's car cost = ₹ (556750 – 280500)
= ₹ 837250

	L	TTh	Th	H	T	O
	5	5	6	7	5	0
–	2	8	0	5	0	0
	8	**3**	**7**	**2**	**5**	**0**

6. Mr Kumar deposited in one bank = ₹ 410825
Deposited in second bank = ₹ 345250
Deposited in third bank = ₹ 574388
So, total amount of all banks = ₹ (410825 + 345250 + 574338)
= ₹ 1330413

		L	TTh	Th	H	T	O
	₹	4	1	0	8	2	5
–	₹	3	4	5	2	5	0
–	₹	5	7	4	3	3	8
	₹ 1	3	3	0	4	1	3

Hence, he deposited ₹ 1330413in total.

7. Distance covered by her car in one year = 15769 km
Distance covered by her car in second year = 12520 km
Distance covered by her car in third year = 16485 km
So, total distance covered by her car in the three years = (12520 + 15769 + 16485) km
= 44774 km

	TTh	Th	H	T	O
	1	2	5	2	0
+	1	5	7	6	9
+	1	6	4	8	5
	4	**4**	**7**	**7**	**4**

Hence, 44774 km was the total distance covered by her car in the three years.

8. A company made mobile sets in 2011 = 47800
A company made mobile sets in December = 3452
So, a company made mobile sets in November = 47800 – 3452
= 44348

	TTh	Th	H	T	O
	4	7	8	0	0
–		3	4	5	2
	4	**4**	**3**	**4**	**8**

Hence, 44348 sets of mobile were made till November.

9. The sum of two numbers = 500000
One number = 45678
So, the other number = 500000 – 45678
= 454322

	L	TTh	Th	H	T	O
	5	0	0	0	0	0
–		4	5	6	7	8
	4	**5**	**4**	**3**	**2**	**2**

10. Number of mangoes in Raghu's farm = 23958
Number of mangoes in Radhe's farm = 23689
Difference = 23958 – 23689
= 269

	TTh	Th	H	T	O
	2	3	9	5	8
–	2	3	6	8	9
			2	**6**	**9**

Hence, Rahu's farm 269 more mangoes grow.

11. Astha had money = ₹ 820100
Money left with Astha = ₹ 78950
So, Cost of the car = ₹ 820100 – ₹ 78950
= ₹ 741150

	L	TTh	Th	H	T	O
	8	2	0	1	0	0
–		7	8	9	5	0
	7	**4**	**1**	**1**	**5**	**0**

Thus, 741150 was the cost of the car.

12. A man had bricks = 15384
Used bricks to make a house = 10249
Used bricks to make a shop = 3672
So, bricks were left = 15584 – (10249 + 3672)
= 15584 – 13921 = 1663

Hence, 1663 bricks were left.

13. Total number of people in a town = 356700
Number of people watch English TV = 12725
Number of people watch Hindi programme = 215600
So, number of people watch Bengali programme
= 356700 – (12725 + 215600)
= 356700 – 228325
= 128375

Hence, 128375 people watch Bengali programme.

14. Ankit has money = ₹ 67000
Cost of a machine = ₹ 85000
Money left with Ankit = ₹ 15000
= ₹ (85000 – 67000) + ₹ 15000
So, he borrow so that = ₹ 18000 + ₹ 15000
= ₹ 33000

Let's Review

1. Tick (✓) the correct choice :

Ans. a. ii b. i c. i d. i e. ii

2. Add the following :

Ans. a.

	5	6	5	3	4
+	2	1	6	3	5
	7	**8**	**1**	**6**	**9**

b.

	3	1	2	6	5
+	1	9	9	9	8
	5	**1**	**2**	**6**	**3**

c.

	3	2	6	1	5	4
+	1	2	5	3	2	8
	4	**5**	**1**	**4**	**8**	**2**

d.

	1	3	7	5	9	0
		4	3	2	1	7
+		2	4	6	3	1
	2	**0**	**5**	**4**	**3**	**8**

3. Subtract the following :

Ans. a.

	4	7	4	6	9
–	2	1	6	8	4
	2	**5**	**7**	**8**	**5**

b.

	4	3	1	6	9	5
–	1	6	8	4	1	5
	2	**6**	**3**	**2**	**8**	**0**

c.

	1	4	7	1	9	5
–		3	8	6	1	9
	1	**0**	**8**	**5**	**7**	**6**

d.

	9	0	0	0	0	0
–		4	5	9	3	7
	8	**5**	**4**	**0**	**6**	**3**

4. Solve the following word problems :

Ans. a. Kishor had marbles = 70250
He gave his friend = 21375
Marbles left with Kishor = 70250 – 21375
= 48875

	TTh	Th	H	T	O
	7	0	2	5	0
–	2	1	3	7	5
	4	**8**	**8**	**7**	**5**

Now, Amit purchased more marbles = 1575
So, total number of marbles = 48875 + 1575
= 50450

	TTh	Th	H	T	O
	4	8	8	7	5
+		1	5	7	5
	5	**0**	**4**	**5**	**0**

Thus, Kishor has 50450 marbles now.

b. The population of village A = 53628
The population of village B = 78426
So, total population of both village = 53628 + 78426
= 132054
Estimated population (nearest 1000) = 132000

	TTh	Th	H	T	O
	5	3	6	2	8
+	7	8	4	2	6
	1	3	2	0	5	4

Exercise 5.1

1. Fill in the blanks :

Ans. a. $35 \times \mathbf{0} = 0$ b. $87 \times \mathbf{1} \times 3 = 261 = 1 \times 3 \times \mathbf{87}$

c. $14 \times 1 \times 3 = 3 \times 1 \times \mathbf{14} = \mathbf{42}$ d. $36{,}000 \times \mathbf{1} = 36{,}000$

e. $75{,}150 \times \mathbf{1} = 76{,}150$ f. $800 \times \mathbf{0} \times 3 = 0$

g. $951 \times 1 = \mathbf{951}$ h. $1256 \times \mathbf{0} = 0$

2. Solve using the shortcut method of multiplication :

Ans. a. $30 \times 400 = \mathbf{12000}$ b. $30 \times \mathbf{1600} = 48{,}000$ c. $\mathbf{65} \times 10 = 650$

d. $\mathbf{30} \times 400 = 12{,}000$ e. $\mathbf{8{,}000} \times 2 = 16{,}000$ f. $40 \times 40 = \mathbf{1{,}600}$

g. $35 \times 10 = \mathbf{350}$ h. $6{,}391 \times 100 = \mathbf{6{,}39{,}100}$ i. $8{,}792 \times 100 = \mathbf{8{,}79{,}200}$

j. $200 \times 500 = \mathbf{1{,}00{,}000}$

3. State True or False against the following statements :

Ans. a. False b. True c. False d. True e. False

Exercise 5.2

1. Multiply the following :

Ans. a.

		9	6	5	7
		×	9	7	
	6	7	5	9	9
+	8	6	9	1	3	0
	9	3	6	7	2	9

b.

		9	8	6	9
		×	7	5	
	4	9	3	4	5
+	6	9	0	8	3	0
	7	4	0	1	7	5

c.

		8	5	9	1
		×	6	8	
	6	8	7	2	8
+	5	1	5	4	6	0
	5	8	4	1	8	8

d.

		5	9	0	8
		×	9	6	
	3	5	4	4	8
+	5	3	1	7	2	0
	5	6	7	1	6	8

2. Find the product :

Ans. a.

	Th	H	T	O
			8	5
		×	3	5
		4	2	5
+	2	5	5	0
	2	9	7	5

Thus, $85 \times 35 = 2975$

b.

	Th	H	T	O
			7	9
		×	1	5
		3	9	5
+		7	9	0
	1	1	8	5

Thus, $79 \times 15 = 1185$

c.

	Th	H	T	O
			9	2
		×	3	8
		7	3	6
+	2	7	6	0
	3	4	9	6

Thus, $92 \times 38 = 3496$

d.

	Th	H	T	O
			8	7
		×	5	4
		3	4	8
+	4	3	5	0
	4	6	9	8

Thus, $87 \times 54 = 4698$

e.

	Th	H	T	O
		1	4	5
		×	3	9
	1	3	0	5
+	4	3	5	0
	5	6	5	5

Thus, $145 \times 39 = 5655$

f.

	TTh	Th	H	T	O
			2	5	4
			×	6	7
		1	7	7	8
+	1	5	2	4	0
	1	7	0	1	8

Thus, $254 \times 67 = 17018$

g.

	Th	H	T	O
			7	6
		×	4	3
		2	2	8
+	3	0	4	0
	3	2	6	8

h.

	TTh	Th	H	T	O
			6	0	8
			×	4	2
		1	2	1	6
+	2	4	3	2	0
	2	5	5	3	6

i.

	TTh	Th	H	T	O
		4	6	5	2
			×	1	9
	4	1	8	6	8
+	4	6	5	2	0
	8	8	3	8	8

Thus, 76 × 43 = 3268

j.

	L	TTh	Th	H	T	O
			3	5	1	0
				×	8	0
			0	0	0	0
+	2	8	0	8	0	0
	3	8	0	8	0	0

Thus, 608 × 42 = 25536

k.

	L	TTh	Th	H	T	O
			9	9	2	2
				×	7	6
		5	9	5	3	2
+	6	9	4	5	4	0
	7	5	4	0	7	2

Thus, 4652 × 19 = 88388

l.

	Th	H	T	O
			6	3
		×	2	9
		5	6	7
+	1	2	6	0
	1	8	2	7

Thus, 3510 × 80 = 380800

m.

	Th	H	T	O
		1	0	4
		×	1	8
		8	3	2
+	1	0	4	0
	1	8	7	2

Thus, 9922 × 76 = 754072

n.

	TTh	Th	H	T	O
			4	5	3
			×	6	2
			9	0	6
+	2	7	1	8	0
	2	8	0	8	6

Thus, 63 × 29 = 1827

o.

	TTh	Th	H	T	O
			1	9	8
			×	7	4
			7	9	2
+	1	3	8	6	0
	1	4	6	5	2

Thus, 104 × 18 = 1872

p.

	TTh	Th	H	T	O
		2	1	3	2
			×	3	8
	1	7	0	5	6
+	6	3	9	6	0
	8	1	0	1	6

Thus, 453 × 62 = 28086

q.

	L	TTh	Th	H	T	O
			9	2	5	4
				×	1	7
		6	4	7	7	8
+		9	2	5	4	0
	1	5	7	3	1	8

Thus, 198 × 74 = 14652

r.

	L	TTh	Th	H	T	O
			8	0	0	7
				×	5	6
		4	8	0	4	2
+	4	0	0	3	5	0
	4	4	8	3	8	2

Thus, 2132 × 38 = 81016

s.

	L	TTh	Th	H	T	O
			3	9	6	5
				×	8	5
		1	9	8	2	5
+	3	1	7	2	0	0
	3	3	7	0	2	5

Thus, 9254 × 17 = 157318

t.

	L	TTh	Th	H	T	O
			4	2	8	0
				×	9	0
			0	0	0	0
+	3	8	5	2	0	0
	3	8	5	2	0	0

Thus, 8007 × 56 = 448392

Thus, 3965 × 85 = 337025

Thus, 4280 × 90 = 385200

Exercise 5.3

1. Multiply the following :

Ans. a.

	2	8	9	5
×	3	2	5	
1	4	4	7	5
5	7	9	0	0
+ 8	6	8	5	0
9	4	0	8	7

b.

	8	5	9	1
×	6	8	7	
6	0	1	3	7
6	8	7	2	8
+ 5	1	5	4	6
5	9	0	2	1

c.

	4	8	6	5
×	2	6	3	
1	4	5	9	5
2	9	1	9	0
+ 9	7	3	0	0
1	2	7	9	4

d.

	5	9	0	8
×	9	6	1	
5	9	0	8	
3	5	4	4	8
+ 5	3	1	7	2
5	6	7	7	5

2. Find the product :

Ans. a.

	TTh	Th	H	T	O
				2	3
		×	2	1	5
			1	1	5
			2	3	0
+		4	6	0	0
	1	5	6	9	5

Thus, 23 × 215 = 15695

b.

	L	TTh	Th	H	T	O
			4	9	3	7
			×	1	3	7
		3	4	5	5	9
	1	4	8	1	1	0
+	4	9	3	7	0	0
	6	7	6	3	6	9

Thus, 4937 × 137 = 676369

c.

	TTh	Th	H	T	O
			8	0	9
		×	1	1	4
		3	2	3	6
		8	0	9	0
+	8	0	9	0	0
	9	2	2	2	6

Thus, 809 × 114 = 92226

d.

	TL	L	TTh	Th	H	T	O
				7	9	0	1
				×	8	0	0
				0	0	0	0
			0	0	0	0	0
+	6	3	2	0	8	0	0
	6	3	2	0	8	0	0

Thus, 7901 × 800 = 6320800

e.

	L	TTh	Th	H	T	O
			1	3	2	6
			×	2	0	4
			5	3	0	4
		0	0	0	0	0
+	2	6	5	2	0	0
	2	7	0	5	0	4

Thus, 1326 × 204 = 270504

f.

	L	TTh	Th	H	T	O
			1	5	9	6
			×	4	1	2
			3	1	9	2
		1	5	9	6	0
+	6	3	8	4	0	0
	6	5	7	5	5	2

Thus, 1596 × 412 = 657552

g.

	TTh	Th	H	T	O
			7	5	3
		×	1	2	3
		2	2	5	9
	1	5	0	6	0
+	7	5	3	0	0
	9	2	6	1	9

Thus, 753 × 123 = 92619

h.

	TL	L	TTh	Th	H	T	O
				8	9	7	3
				×	4	7	2
				1	7	9	4	6
			6	2	8	1	1	0
+	3	5	8	9	2	0	0
	4	2	3	5	2	5	6

Thus, 8973 × 472 = 4235256

i.

	TL	L	TTh	Th	H	T	O
				4	0	7	0
				×	9	6	0
				0	0	0	0
		2	4	4	2	0	0
+	3	6	6	3	0	0	0
	3	9	0	7	2	0	0

Thus, 4070 × 960 = 3907200

j.

	TL	L	TTh	Th	H	T	O
				8	7	1	6
				×	9	1	4
				3	4	8	6	4
				8	7	1	6	0
+	7	8	4	4	4	0	0
	7	9	6	6	4	2	4

Thus, 8716 × 914 = 7966424

k.

	L	TTh	Th	H	T	O
			2	8	4	1
			×	1	5	4
			9	3	6	4
	1	4	2	0	5	0
+	2	8	4	1	0	0
	4	3	7	5	1	4

Thus, 2841 × 154 = 437514

l.

	TL	L	TTh	Th	H	T	O
				4	5	3	1
				×	2	4	9
			4	0	7	7	9
		1	8	1	2	4	0
+		9	0	6	2	0	0
	1	1	2	8	2	1	9

Thus, 4531 × 249 = 1128219

m.

	TL	L	TTh	Th	H	T	O
				8	7	9	2
				×	3	6	1
				8	7	9	2
		5	2	7	5	2	0
+	2	6	3	7	6	0	0
	3	1	7	3	9	1	2

Thus, 8792 × 361 = 3173912

n.

	L	TTh	Th	H	T	O
			3	0	7	5
			×	2	1	6
		1	8	4	5	0
		3	0	7	5	0
+	6	1	5	0	0	0
	6	6	4	2	0	0

Thus, 3075 × 216 = 664200

o.

	TTh	Th	H	T	O
		3	6	1	
	×	2	2	6	
	2	1	6	6	
	7	2	2	0	
+	7	2	2	0	0
	8	1	5	8	6

Thus, 361 × 226 = 81586

p.

	TTh	Th	H	T	O
		1	2	3	7
			×	4	5
		6	1	8	5
+	4	9	4	8	0
	5	5	6	6	5

Thus, 1237 × 45 = 55665

Mental Maths

1. Fill in the blanks :

Ans. a. **13** × 7 = 91 b. **9** × 8 = 72

c. 7 × **11** = 77 d. **7** × 14 = 98

2. Write the product without actually multiplying :

Ans. a. 248 × 10 = **2480**
248 × 100 = **24800**
248 × 100 = **24800**

b. 156 × 50 = **7800**
156 × 500 = **7800**
156 × 5,000 = **7,80,000**

3. Find the product by grouping suitably :

Ans. a. **307 × 4 × 5**
LHS = 307 × (4 × 5)
= 307 × 20
= 6140
Thus, 307 × 4 × 5 = **6140**

b. **200 × 4 × 25**
LHS = 200 × (4 × 25)
= 200 × 100
= 20000
Thus, 200 × 4 × 25 = **20000**

c. **2,000 × 10 × 5**
LHS = 2000 × (10 × 5)
= 2000 × 50
= 100000
Thus, 2000 × 10 × 5 = **100000**

d. **7,000 × 50 × 2**
LHS = 7000 × (50 × 2)
= 7000 × 100
= 700000
Thus, 7000 × 50 × 2 = **700000**

4. Find the product of one hundred five and eighty-nine.

Ans.

	Th	H	T	O
		1	0	5
		×	8	9
		9	4	5
+	8	4	0	0
	9	3	4	5

5. Fill in the missing digits.

Ans. a.

	Th	H	T	O
		2	**7**	3
×			2	**4**
	1	0	9	2
×	5	4	**6**	**0**
	6	**5**	5	**4**

b.

	L	TTh	Th	H	T	O
			2	9	**5**	6
				1	7	**2**
×			5	9	1	2
	2	**0**	**6**	**9**	2	**0**
×	2	9	5	6	0	**0**
	5	0	**8**	**4**	**3**	**2**

Exercise 5.4

1. By rounding off to the nearest ten :

Ans. a. **76 × 18**

Rounding off to the nearest 10, we have

76 → 80
18 → × 20
1600

The actual product is 76 × 18 = 1368

b. **65 × 32**

Rounding off to the nearest 10, we have

65 → 70
32 → × 30
2100

The actual product is 65 × 32 = 2080

c. **84 × 57**

Rounding off to the nearest 10, we have

84 → 80
57 → × 60
4800

The actual product is 84 × 57 = 4788

d. **28 × 82**

Rounding off to the nearest 10, we have

28 → 30
82 → × 80
2400

The actual product is 28 × 82 = 2296

e. **44 × 55**

Rounding off to the nearest 10, we have

44 → 40
55 → × 60
2400

The actual product is 44 × 55 = 2420

f. **56 × 42**

Rounding off to the nearest 10, we have

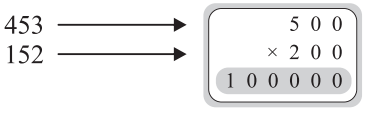
56 → 60
42 → × 40
2400

The actual product is 56 × 42 = 2352

2. By rounding off to the nearest hundred :

Ans. a. **453 × 152**

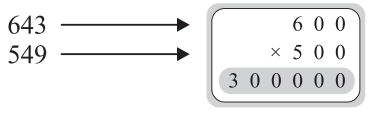
Rounding off to the nearest 100, we have



The actual product is 453 × 152 = 68,856

b. **643 × 549**

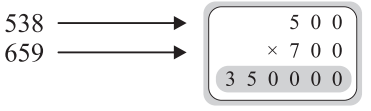
Rounding off to the nearest 100, we have



The actual product is 643 × 549 = 3,53,007

c. **538 × 659**

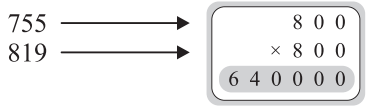
Rounding off to the nearest 100, we have



The actual product is 538 × 659 = 3,50,000

d. **755 × 819**

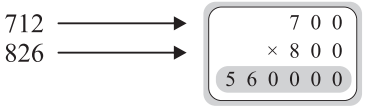
Rounding off to the nearest 100, we have



The actual product is 755 × 819 = 6,18,345

e. **712 × 826**

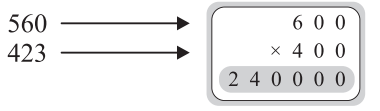
Rounding off to the nearest 100, we have



The actual product is 712 × 826 = 5,60,000

f. **560 × 423**

Rounding off to the nearest 100, we have

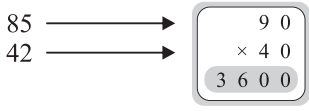


The actual product is 560 × 423 = 2,36,880

3. By rounding up one number and rounding down the other number, to the nearest ten :

Ans. a. **85 × 42**

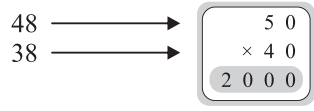
Rounding off to the nearest 10, we have



The actual product is 85 × 42 = 3570

b. **48 × 38**

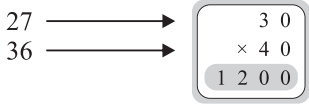
Rounding off to the nearest 10, we have



The actual product is 48 × 38 = 1824

c. **27 × 36**

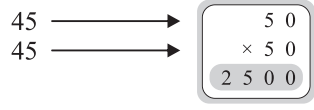
Rounding off to the nearest 10, we have



The actual product is 27 × 36 = 972

d. **45 × 45**

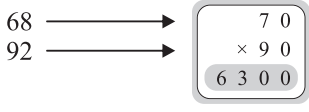
Rounding off to the nearest 10, we have



The actual product is 45 × 45 = 2025

e. **68 × 92**

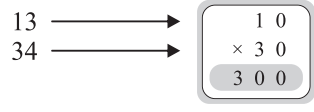
Rounding off to the nearest 10, we have



The actual product is 68 × 92 = 6300

f. **13 × 34**

Rounding off to the nearest 10, we have



The actual product is 13 × 34 = 442

4. By rounding up one number and rounding down the other number, to the nearest hundred :

Ans. a. **463 × 151**

Rounding off to the nearest 100, we have

463 → 500
151 → × 100
5 0 0 0 0

The actual product is 463 × 150 = 69450

b. **743 × 549**

Rounding off to the nearest 100, we have

743 → 800
549 → × 500
4 0 0 0 0 0

The actual product is 743 × 549 = 407907

c. **583 × 695**

Rounding off to the nearest 100, we have

583 → 600
695 → × 600
3 6 0 0 0 0

The actual product is 583 × 695 = 405185

d. **842 × 349**

Rounding off to the nearest 100, we have

842 → 900
349 → × 300
2 7 0 0 0 0

The actual product is 842 × 349 = 293858

e. **646 × 714**

Rounding off to the nearest 100, we have

646 → 700
714 → × 700
4 9 0 0 0 0

The actual product is 646 × 714 = 461244

f. **423 × 565**

Rounding off to the nearest 100, we have

423 → 400
565 → × 600
2 4 0 0 0 0

The actual product is 423 × 565 = 238995

Exercise 5.5

Ans. 1. A bus carries passengers in a day = 94
Number of days in a year = 365
So, a bus carries passengers in a year = 365 × 94
= 34310

It will carry 34310 passengers in a year.

	H	T	O
	3	6	5
×	9	4	
1	4	6	0
+ 3	2	8	5	0
3	4	3	1	0

2. Number of boxes = 483
Number of marbles in a box = 60
So, number of marbles in 483 boxes = 483 × 60
= 28980

Hence, there are 28980 marbles in 483 boxes.

	Th	H	T	O
		4	8	3
×		6	0	
	0	0	0	
+ 2	8	9	8	0
2	8	9	8	0

3. Cost of an almirah = ₹ 4325
So, cost of 55 almirahs = ₹ 4325 × 55
= ₹ 237875

Hence, ₹ 237875 will be the cost of 55 such almirahs.

	L	TTh	Th	H	T	O
			4	3	2	5
×				5	5	
		2	1	6	2	5
+	2	1	6	2	5	0
	2	3	7	8	7	5

4. Since in a Kilometre = 1000 metres
So, in 234 Kilometres = 1000 × 234 metres
= 234000 metres

Hence, those are 234000 metres in 234 kilometres.

	L	TTh	Th	H	T	O
			1	0	0	0
×				2	3	4
			4	0	0	0
		3	0	0	0	0
+	2	0	0	0	0	0
	2	3	4	0	0	0

5. Cost of a pen drive = ₹ 425
So, cost of 75 pen drives = ₹ 425 × 75
= ₹ 31875
Hence, the cost of 75 pen drive will be ₹ 31875.

TTh	Th	H	T	O
		4	2	5
		×	7	5
	2	1	2	5
+ 2	9	7	5	0
3	1	8	7	5

6. Number of tickets = 347
Cost of a ticket = ₹ 55
So, total cost of 347 tickets = ₹ 347 × 55
= ₹ 19085
Hence, ₹ 19085 was collected.

TTh	Th	H	T	O
		3	4	7
		×	5	5
	1	7	3	5
+ 1	7	3	5	0
1	9	0	8	5

7. A bag contains of sugar = 184 kg
So, the quantity of sugar in 147 bags = 184 × 147 kg
= 27048 kg
Hence, 27048 Kg is the quantity of sugar in 147 such bags.

TTh	Th	H	T	O
		1	8	4
	×	1	4	7
	1	2	8	8
	7	3	6	0
+ 1	8	4	0	0
2	7	0	4	8

8. Cost of a bicycle = ₹ 665
So, cost of 285 bicycles = ₹ 665 × 285
= ₹ 189525
Hence, he payed ` 189525

L	TTh	Th	H	T	O
			6	6	5
		×	2	8	5
		3	3	2	5
	5	3	2	0	0
+ 1	3	3	0	0	0
1	8	9	5	2	5

9. One notebook contains pages = 260
So, 185 notebooks contains pages = 260 × 185
= 48100
Hence, there are 48100 pages in all.

TTh	Th	H	T	O
		2	6	0
	×	1	8	5
	1	3	0	0
2	0	8	0	0
+ 2	6	0	0	0
4	8	1	0	0

10. Meenal makes paper bags in a day = 450
So, she can make paper bags in 365 days = 450 × 365
Hence, she can make 164250 = 164250
paper bags in 365 days.

L	TTh	Th	H	T	O
			4	5	0
		×	3	6	5
		2	2	5	0
	2	7	0	0	0
+ 1	3	5	0	0	0
1	6	4	2	5	0

11. The cost of fencing one plot of land = ₹ 900
So, the cost of fencing 375 plots of land = ₹ 900 × 375
= ₹ 337500
Hence, ₹ 3 3 7 5 0 0 is the total cost of fencing 375 plots of land.

L	TTh	Th	H	T	O
			9	0	0
		×	3	7	5
		4	5	0	0
	6	3	0	0	0
+ 2	7	0	0	0	0
3	3	7	5	0	0

12. School fee paid by 1 child = ₹ 4285
School fee paid by 36
children = ₹ 4285 × 36
= ₹ 154260
Thus, ₹ 154260 is paid by 36 children.

TTh	Th	H	T	O
	4	2	8	5
		×	3	6
	2	5	7	1	0
+ 1	2	8	5	5	0
1	5	4	2	6	0

Let's Review

1. Tick (✓) the correct choice :

Ans. a. ii b. i c. iii d. ii

2. Multiple the following :

Ans. a.

1	2	5	6
		×	5
6	2	8	0

b.

	2	2	9	5
		×	1	7
3	9	0	1	5

c.

	1	4	8	9
		×	1	2	9
1	9	2	0	8	1

d.

	1	4	9	3
		×	7	6
1	1	3	4	6	8

3. Arrange in column and multiply :

Ans. a.

	TTh	Th	H	T	O
			2	3	4
		×	1	2	0
			0	0	0
		4	6	8	0
+	2	3	4	0	0
	2	8	0	8	0

b.

	L	TTh	Th	H	T	O
			1	1	2	8
			×	3	4	5
			5	6	4	0
		4	5	1	2	0
+	3	3	8	4	0	0
	3	8	9	1	6	0

c.

	L	TTh	Th	H	T	O
			1	2	5	9
			×	4	2	3
			3	7	7	7
		2	5	1	8	0
+	5	0	3	6	0	0
	5	3	2	5	5	7

4. Fill in the blanks :

Ans. a. 329 × 10 = **3290** b. 126× 10 = **1260** c. 27 × 100 = **2700**
d. 24 × 1000 = **24000** e. 3 × 13 × 5 × 0 = **0** f. 18 × 19 = 19 × **18**

5. Solve :

Ans. a. Number of beads in a box = 743
So, number of beads in 235 boxes = 743 × 235
= 174605
Hence, there will be 174605 beads in 235 such boxes.

	L	TTh	Th	H	T	O
				7	4	3
			×	2	3	5
			3	7	1	5
		2	2	2	9	0
+	1	4	8	6	0	0
	1	7	4	6	0	5

b. In one round, distance covered by a train = 1902 km
So, In 27 rounds, distance covered by a train = 1902 × 27 km
= 51354 km
Hence, it will cover 51354 km in 27such trips.

	TTh	Th	H	T	O
		1	9	0	2
			×	2	7
	1	3	3	1	4
+	3	8	0	4	0
	5	1	3	5	4

Unit Six : Division

Exercise 6.1

1. Fill in the blanks :

Ans. a. 75 ÷ 1 = **75** b. 1,250 ÷ 1 = **1250** c. 896 ÷ 896 = **1**
d. 0 ÷ 251 = **0** e. 0 ÷ 16 = **0** f. 53 ÷ 1 = **53**
g. 546 ÷ 1 = **546** h. 1,409 ÷ 1,409 = **1** i. 8,576 ÷ 1 = **8,576**
j. 8,078 ÷ 1 = **8,078** k. 9,695 ÷ 9,695 = **1** l. 3,537 ÷ 1 = **3,537**

Exercise 6.2

1. Divide the following :

Ans. a.

```
  869
4)3479
 -32
  27
 -24
  39
 -36
   3
```

b.

```
  1892
5)9463
 -5
  44
 -40
  46
 -45
  13
 -10
   3
```

c.

```
  547
8)4382
 -40
  38
 -32
  62
 -56
   6
```

d.

```
  140
3)4210
 -3
  12
 -12
  10
 -9
   1
```

2. Divide the following. Find remainder, if any :

Ans. a.

```
  1502
5)7510
 -5
  25
 -25
  10
 -10
   x
```

Thus, 7510 ÷ 5 = 1502

b.

```
  4809
2)9618
 -8
  16
 -16
  18
 -18
   x
```

Thus, 9618 ÷ 2 = 4809

c.

```
  787
4)3151
 -28
  35
 -32
  31
 -28
   3
```

Thus, Q = 787, R = 3

d.

```
  476
3)1428
 -12
  22
 -21
  18
 -18
   x
```

Thus, 1428 ÷ 3 = 476

e.

```
  874
9)7871
 -72
  67
 -63
  41
 -36
   5
```

Thus, Q = 874, R = 5

f.

```
  475
6)24450
 -24
  45
 -42
  30
 -30
   x
```

Thus, 24450 ÷ 6 = 475

g.

```
  9186
6)55121
 -54
  11
 -6
  52
 -48
  41
 -36
   5
```

Thus, Q = 9186, R = 5

h.

```
  11690
7)81831
 -7
  11
 -7
  48
 -42
  63
 -63
   1
 -0
   1
```

Thus, Q = 11690, R = 1

i.

```
  1249
8)9999
 -8
  19
 -16
  39
 -32
  79
 -72
   7
```

Thus, Q = 1249, R = 7

j.

```
   2965
3)8896
 -6
  28
 -27
   19
 -18
   16
 -15
    1
```

Thus, Q = 29690, R = 1

3. Divide the following and check your answers :

Ans. a.

```
   1562
5)7810
 -5
  28
 -25
   31
 -30
   10
 -10
    x
```

Thus, 7810 ÷ 5 = 1562

Check :

Dividend = D × Q + R

LHS = 7810

RHS = 1562 × 5 + 0

= 7810

∴ LHS = RHS

So, our answer is correct.

b.

```
   790
2)1581
 -14
   18
 -18
    1
  -0
    1
```

Thus, Q = 790, R = 1

Check :

Dividend = D × Q + R

LHS = 1581

RHS = 2 × 790 + 1

= 1580 + 1 = 1581

∴ LHS = RHS

So, our answer is correct.

c.

```
   345
7)2417
 -21
   31
 -28
   37
 -35
    2
```

Thus, Q = 345, R = 7

Check :

Dividend = D × Q + R

RHS = 345 × 7 + 2

= 2415 + 2

= 2417

LHS = 2417

∴ LHS = RHS

So, our answer is correct.

d.

```
   2083
3)6250
 -6
   25
 -24
   10
 -9
    1
```

Thus, Q = 2083, R = 1

Check :

Dividend = D × Q + R

LHS = 6250

RHS = 3 × 2083 + 1

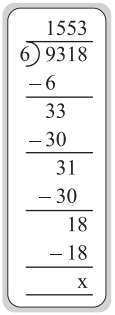
= 6249 + 1

= 6250

∴ LHS = RHS

So, our answer is correct.

e.



Thus, 9318 ÷ 6 = 15853

Check :

Dividend = D × Q + R

LHS = 9318

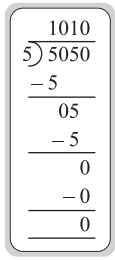
RHS = 6 × 1553 + 0

= 9318

∴ LHS = RHS

So, our answer is correct.

f.



Thus, 5050 ÷ 5 = 1010

Check :

Dividend = D × Q + R

LHS = 5050

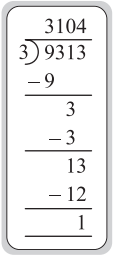
RHS = 5 × 1010 + 0

= 5050

∴ LHS = RHS

So, our answer is correct.

g.



Thus, Q = 3104, R = 1

Check :

Dividend = D × Q + R

LHS = 9313

RHS = 3 × 3104 + 1

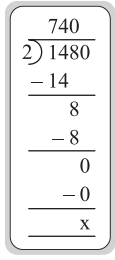
= 9312 + 1

= 9313

∴ LHS = RHS

So, our answer is correct.

h.



Thus, 1480 ÷ 2 = 740

Check :

Dividend = D × Q + R

LHS = 1480

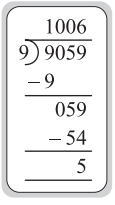
RHS = 2 × 740 + 0

= 1480

∴ LHS = RHS

So, our answer is correct.

i.



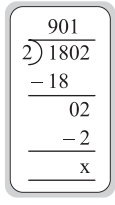
Thus, Q = 1006, R = 9

Check :

Dividend = D × Q + R

LHS = 9059

j.



Thus, 1802 ÷ 2 = 901

Check :

Dividend = D × Q + R

LHS = 1802

RHS	=	9 × 1006 + 5		RHS	=	2 × 901 + 0	
	=	9054 + 5			=	1802	
	=	9059					
∴ LHS	=	RHS		∴ LHS	=	RHS	

So, our answer in correct. So, our answer in correct.

Exercise 6.3

1. Divide :

Ans. a.

```
   43
12)516
  -48
   36
  -36
    x
```

b.

```
   19
59)1121
  -59
   531
  -531
    x
```

c.

```
   153
15)2295
  -15
    79
  -75
    45
  -45
    x
```

d.

```
   176
29)5104
  -29
   220
  -203
    174
  -174
     x
```

2. Divide to find the quotient and remainder. Also verify your answer :

Ans. a.

```
   20
39)787
  -78
    7
   -0
    7
```

Thus, Q = 20, R = 7

Check :

D × Q + R	=	Dividend
39 × 20 + 7	=	787
787	=	787

Thus, answer is correct.

b.

```
   11
28)319
  -28
   39
  -28
   11
```

Thus, Q = 11, R = 11

Check :

D × Q + R	=	Dividend
28 × 11 + 11	=	319
308 + 11	=	319
319	=	319

Thus, answer is correct.

c.

```
   27
33)918
  -66
   258
  -231
    27
```

Thus, Q = 27, R = 27

Check :

D × Q + R	=	Dividend
33 × 27 + 27	=	918
891 + 27	=	918
918	=	918

Thus, answer is correct.

d.

```
   155
31)4816
  -31
   171
  -155
    166
  -155
    11
```

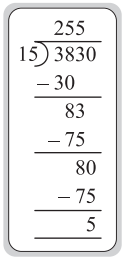
Thus, Q = 155, R = 11

Check :

D × Q + R	=	Dividend
31 × 155 + 11	=	4816
4805 + 11	=	4816
4816	=	4816

Thus, answer is correct.

e.



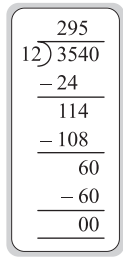
Thus, Q = 255, R = 5

Check :

D × Q + R	=	Dividend
15 × 255 + 5	=	3830
3825 + 5	=	3830

Thus, answer is correct.

f.



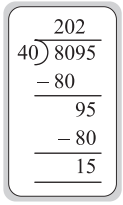
Thus, 3540 ÷ 12 = 295

Check :

D × Q + R	=	Dividend
12 × 295 + 0	=	3540
3540	=	3540

Thus, answer is correct.

g.



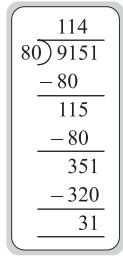
Thus, Q = 202, R = 15

Check :

D × Q + R	=	Dividend
40 × 202 + 15	=	8095
8080 + 15	=	8095
8095	=	8095

Thus, answer is correct.

h.



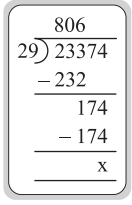
Thus, Q = 114, R = 31

Check :

D × Q + R	=	Dividend
80 × 114 + 31	=	9151
9120 + 31	=	9151
9151	=	9151

Thus, answer is correct.

i.



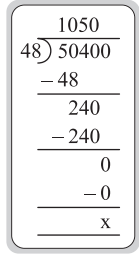
Thus, 23374 ÷ 29 = 806

Check :

D × Q + R	=	Dividend
29 × 806 + 0	=	23374
23374	=	23374

Thus, answer is correct.

j.



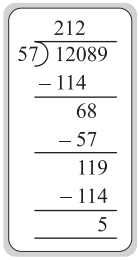
Thus, 50400 ÷ 48 = 1050

Check :

D × Q + R	=	Dividend
48 × 1050 + 0	=	50400
50400	=	50400

Thus, answer is correct.

k.



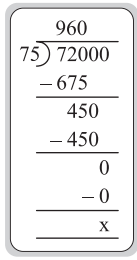
Thus, Q = 212, R = 5

Check :

D × Q + R	=	Dividend
57 × 212 + 5	=	12089
12084 + 5	=	12089
12089	=	12089

Thus, answer is correct.

l.



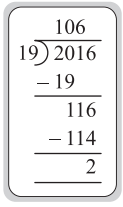
Thus, 72000 ÷ 75 = 960

Check :

D × Q + R	=	Dividend
75 × 960 + 0	=	72000
72000	=	72000

Thus, answer is correct.

m.



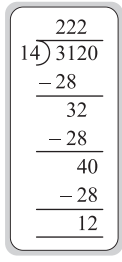
Thus, Q = 106, R = 2

Check :

D × Q + R	=	Dividend
19 × 106 + 2	=	2016
2014 + 2	=	2016
2016	=	2016

Thus, answer is correct.

n.



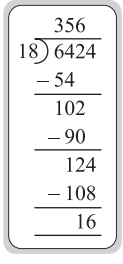
Thus, Q = 222, R = 12

Check :

D × Q + R	=	Dividend
14 × 222 + 12	=	3120
3108 + 12	=	3120
3120	=	3120

Thus, answer is correct.

o.



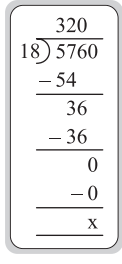
Thus, Q = 356, R = 16

Check :

D × Q + R	=	Dividend
18 × 356 + 16	=	6424
6408 + 16	=	6424
6424	=	6424

Thus, answer is correct.

p.



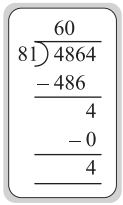
Thus, 5769 ÷ 18 = 320

Check :

D × Q + R	=	Dividend
18 × 320 + 0	=	5760
5760	=	5760

Thus, answer is correct.

q.



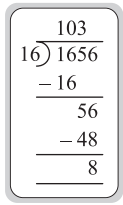
Thus, Q = 60, R = 4

Check :

D × Q + R	=	Dividend
81 × 60 + 4	=	4864
4860 + 4	=	4864
4864	=	4864

Thus, answer is correct.

r.



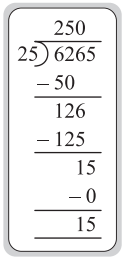
Thus, Q = 103, R = 4

Check :

D × Q + R	=	Dividend
16 × 103 + 8	=	1656
1648 + 8	=	1656
1656	=	1656

Thus, answer is correct.

s.



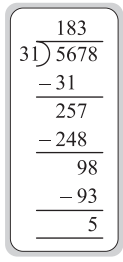
Thus, Q = 250, R = 15

Check :

D × Q + R	=	Dividend
25 × 250 + 15	=	6265
6250 + 15	=	6265
6265	=	6265

Thus, answer is correct.

t.



Thus, Q = 183, R = 5

Check :

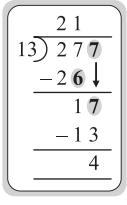
D × Q + R	=	Dividend
31 × 183 + 5	=	5678
5673 + 5	=	5678
5678	=	5678

Thus, answer is correct.

Mental Maths

Fill in the boxes.

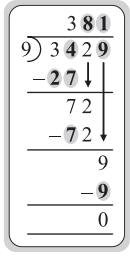
Ans. a.



Q = 21

R = 4

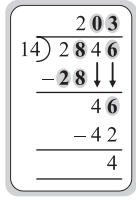
b.



Q = 381

R = 0

c.



Q = 203

R = 4

Exercise 6.4

1. Fill in the blanks :

Ans. a. **190 ÷ 10**

```
   19
10)190
  -10
   90
  -90
    x
```

So, 190 ÷ 10
Q = 19, R = 0

b. **29000 ÷ 100**

```
   290
100)29000
  -200
   900
  -900
     0
    -0
     x
```

So, 29000 ÷ 100
Q = 290, R = 0

c. **80 ÷ 10**

```
   8
10)80
 -80
   x
```

So, 80 ÷ 10
Q = 8, R = 0

d. **208000 ÷ 1000**

```
    108
1000)208000
   -2000
    8000
   -8000
       x
```

So, 208000 ÷ 1000
Q = 108, R = 0

e. **1205000 ÷ 100**

```
    108
100)1205000
   -100
    205
   -200
     500
    -500
       0
       0
```

So, 1205000 ÷ 100
Q = 12050, R = 0

f. **75000 ÷ 10**

```
   7500
10)75000
  -70
   50
  -50
    0
   -0
    x
```

So, 75000 ÷ 10
Q = 7500, R = 0

2. Find the quotient & remainder :

Ans.

	Sum	Quotient	Remainder
a.	838 ÷ 10	83	8
b.	5,060 ÷ 1,000	5	60
c.	972 ÷ 100	9	72
d.	5,861 ÷ 100	58	61
e.	4,000 ÷ 100	40	0
f.	63,460 ÷ 10	6346	0
g.	3,000 ÷ 10	300	
h.	860 ÷ 100	8	60

Exercise 6.5

Ans. 1. Total amount of donated = ₹ 4250
Number of students = 50
So, each student collected amount = ₹ 4250 ÷ 50
= ₹ 85
Hence, each student contributed ₹ 85.

```
   85
50)4250
  -400
   250
  -250
     x
```

2. Total number of students = 1620
Number of rooms = 81
So, number of children in each room = 1620 ÷ 81
= 20
Hence, 20 children were seated in each room.

```
   20
81)1620
  -162
   ---
     0
    -0
   ---
     x
```

3. Total number of caps = 4275
A packet can contain caps = 75
So, number of packets = 4275 ÷ 75
= 57
Hence, 57 packets are needed to pack 4275 caps.

```
   57
75)4275
  -375
   ---
   525
  -525
   ---
     x
```

4. Product of two numbers = 28,000
One number = 70
So, other number = 28,000 ÷ 70
= 400
Hence, 400 is the other number.

```
   400
70)28000
  -280
   ---
    00
   -00
   ---
     x
```

5. Mahi bought candies = 14560
Number of bags = 28
So, number of candies in each bag = 14560 ÷ 28
= 520
Hence, there are 520 candies in a bag.

```
   520
28)14560
  -140
   ---
    56
   -56
   ---
     0
    -0
   ---
     x
```

6. Total number of sold tickets = 3392
Number of sections in an auditorium = 16
So, number of people in each section = 3392 ÷ 16
= 212
Hence, 212 people are sitting in each section.

```
   212
16)3392
  -32
   ---
    19
  -16
   ---
    32
  -32
   ---
     x
```

7. Total number of chirs = 25901
Number of chairs in a row = 19
So, number of rows = 25901 ÷ 19
= 1363, R = 4
Hence, 1363 rows will be made and 4 chairs will be left.

```
  1363
19)25901
  -19
   ---
    69
   -57
   ---
   120
  -114
   ---
    61
   -57
   ---
     4
```

8. Total number of hippos in a zoo = 5040
Number of cages = 84
So, number of hippos in a cage = 5040 ÷ 84
= 60
Hence, there are 60 hippos in each cage.

```
   60
84)5040
  -504
   ---
     0
    -0
   ---
     x
```

9. Cost of 16 watches = ₹ 4928
So, cost of one watch = ₹ 4928 ÷ 16
= ₹ 308
Hence, the cost of 1 watch is ₹ 308

```
  308
16)4928
 -48
  128
 -128
    x
```

10. In 70 rows, number of chairs = 2450
In 1 rows, number of chairs = 2450 ÷ 70
= 35
Hence, there are 35 chairs in each now.

```
  35
70)2450
 -210
  350
 -350
    x
```

Exercise 6.6

1. Find the value of the following :

Ans. a. 5 candles cost ₹ 50.00. How much will 8 candles cost?
5 candles cost = ₹ 51.00
∴ 1 candle cost = ₹ 15 ÷ 5 = ₹ 3
∴ 8 candles cost = ₹ 3 × 8 = ₹ 24

b. 3 ice-creams cost ₹ 36.00. How much will 5 ice-creams cost?
3 ice-creams cost = ₹ 36.00
∴ 1 ice-cream cost = ₹ 36 ÷ 3 = ₹ 12
∴ 5 ice-creams cost = ₹ 12 × 5 = ₹ 60

2. Solve the following :

Ans. a. Cost of 5 fan = ₹ 5650
∴ Cost of 1 fan = 5650 ÷ 5 = ₹ 1130
∴ Cost of 8 fans = 1130 × 8 = ₹ 9040
Thus, the cost of 8 fans is ₹ 9040.

b. Cost of 8 books = ₹ 320
So, Cost of 1 book = ₹ 320 ÷ 8 = ₹ 40
So, Cost of 16 books = ₹ 40 × 16 = ₹ 640
Thus, the cost of 16 books is ₹ 640

c. The zym fees for 3 months=₹ 1260
So, the zym fees for 1 month = ₹ 1260 ÷ 3 = ₹ 420
So, the zym fees for 12 months = ₹ 420 × 12 = ₹ 5040
Hence, ₹ 5040 is the fees for the whole years.

d. Cost of 5 packets of tea = ₹ 1200
∴ Cost of a packet of tea = ₹ 1200 ÷ 5 = ₹ 240
So, Cost of 10 packets of tea = ₹ 240 × 10 = ₹ 2400
Hence, ₹ 2400 is the cost of 10 packets.

e. Cost of 10 pair of shocks = ₹ 60.50
∴ Cost of 1 pair of shocks = ₹ 60.50 ÷ 10 = ₹ 6.05
Hence, ₹ 6.05 is the cost of 1 pair of shocks.

f. Cost of 4 chocolates = ₹ 52.80
∴ Cost of 1 chocolate = ₹ 52.80 ÷ 4 = ₹ 13.20
∴ Cost of 8 chocolates = ₹ 13.20 × 8 = ₹ 105.60
Hence, ₹ 105.60 is the cost of 8 chocolates.

g. Cost of 7 packets of biscuits = ₹ 63.00
∴ Cost of 1 packet of biscuits = ₹ 63.00 ÷ 7 = ₹ 9
∴ Cost 9 packets of biscuits = ₹ 9 × 9 = ₹ 81.00
Hence, ₹ 81.00 is the cost of 9 packets of biscuits.

h. Cost of 11 cakes = ₹ 66.55
∴ Cost of 1 cake = ₹ 66.55 ÷ 11 = 6.05
∴ Cost of 5 cakes = ₹ 6.05 × 5 = ₹ 30.25
Hence, ₹ 30.25 is the cost of 5 cakes.

i. Cost of 12 spoons = ₹ 360.00
∴ Cost of 1 spoon = ₹ 360.00 ÷ 12 = ₹ 30.00
∴ Cost of 16 spoons = ₹ 30.00 × 16 = ₹ 480.00
Hence, ₹ 480.00 is the cost of 16 spoons.

j. The school fees for 4 months = ₹ 1680
∴ The school fees for 1 month = ₹ 1680 ÷ 4 = ₹ 420
∴ The school fees for the whole year = ₹ 420 × 12 = ₹ 5040
Hence, ₹ 5040 is the fees for the whole year.

k. Cost of 3 pizzas = ₹ 39.60
∴ Cost of 1 pizzas = ₹ 39.60 ÷ 3 = ₹ 13.2
∴ Cost of 8 pizzas = ₹ 13.2 × 8 = ₹ 105.60
Hence, ₹ 105.60 is the cost of 8 pizzas.

l. Cost of 8 litres of petrol = ₹ 560.00
∴ Cost of 1 litre of petrol = ₹ 560 ÷ 8 = ₹ 70
Hence, One litre of petrol cost is ₹ 70.

m. Cost of one dozen milk bottles = ₹ 360
∴ Cost of one bottle of milk = ₹ 360 ÷ 12 = ₹ 30
∴ Cost of 8 bottles of milk = ₹ 30 × 8 = ₹ 240

Let's Review

1. Tick (✓) the correct choice :

Ans. a. ii b. i c. iii d. i

2. Divide the following to find the quotient and remainder :

Ans. a.

```
   7
6) 440
 - 42
   20
 - 18
    2
```

Thus, Q = 7, R = 2

b.

```
   36
26) 948
 - 78
  168
 - 156
   12
```

Thus, Q = 36, R = 12

c.

```
   57
17) 984
 - 85
  134
 - 119
   15
```

Thus, Q = 57, R = 17

d.

```
   592
14) 8290
 - 70
  129
 - 126
   30
 - 28
    2
```

Thus, Q = 592, R = 2

e.
```
   196
9 ) 1770
  - 9
  ----
    87
  - 81
  ----
    60
  - 54
  ----
     6
```
Thus, Q = 196, R = 6

f.
```
   176
15 ) 2650
  - 15
  ----
    115
  - 105
  ----
     100
   - 90
   ----
      10
```
Thus, Q = 176, R = 10

g.
```
   185
12 ) 2230
  - 12
  ----
    103
  - 96
  ----
     70
   - 60
   ----
      10
```
Thus, Q = 185, R = 10

h.
```
   232
21 ) 4890
  - 42
  ----
     69
   - 63
   ----
      60
    - 42
    ----
      18
```
Thus, Q = 232, R = 18

3. Fill in the blanks :

Ans. a. 630 ÷ 10 ⇒ Q = **63**, R = **0**

b. 2,342 ÷ 100 ⇒ Q = **23**, R = **42**

c. 2,260 ÷ 1,000 ⇒ Q = **2**, R = **260**

d. 6,236 ÷ 100 ⇒ Q = **62**, R = **36**

4. Solve the following word problems :

Ans. a. Gaurav bought candies = 1020
Number of his friends = 17
So, each friend will get candies = 1020 ÷ 17
= 60
Hence, each friend will get 60 candies.

```
   60
17 ) 1020
  - 102
  -----
      0
    - 0
    ---
      x
```

b. Number of erasers = 1575
Number of boxes = 15
So, each box contains erasers = 1575 ÷ 15
= 105
Hence, he packed 105 boxes.

```
   105
15 ) 1575
  - 15
  ----
     75
   - 75
   ----
      0
```

Unit Seven : Multiples and Factors

Exercise 7.1

1. Fill in the blanks :

Ans. a. 5 × 6 = 30. So, 30 is the multiple of **5** and **6**.

b. 8 × 9 = 72. So, 72 is the multiple of **8** and **9**.

c. 2 × 3 × 8 = 48. So, 48, is the multiple of **2**, **3** and **8**.

d. **Zero** is the multiple of every number.

e. A number is always a multiple of **1**.

2. Write the next 3 multiples of :

Ans. a.	4	:	8,	12	**16**	**20**	**24**
b.	3	:	6,	9	**12**	**15**	**18**
c.	9	:	18,	27	**36**	**45**	**54**
d.	15	:	30,	45	**60**	**75**	**90**
e.	17	:	34,	51	**68**	**85**	**102**
f.	20	:	40,	60	**80**	**100**	**120**

3. Answer the following questions :

Ans. a. 2 b. 1 c. Yes d. No e. 998

4. Circle the even numbers and cross the odd numbers :

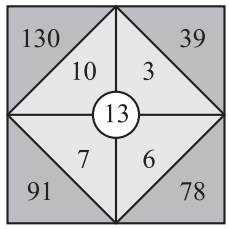
Ans.

22	16	~~25~~	10	~~7~~	4	6	~~33~~	18	~~37~~	~~57~~
92	76	~~31~~	~~43~~	~~55~~	20	12	~~63~~	86	~~5~~	100
~~99~~	34	~~85~~	64	~~11~~	~~71~~	56	44	30	~~79~~	~~91~~
48	~~25~~	40	~~9~~	~~37~~	8	~~19~~	~~3~~	~~69~~	54	10

Mental Maths

Magic Multiple. Find the missing numbers.

Ans.



Exercise 7.2

1. First find six multiples of each of these numbers, and then find 3 common multiples. Finally, find the LCM :

Ans.

S. No.	Numbers	Multiples	Common multiples	LCM
a.	3 6	3, 6, 9, 12, 15, 18 6, 12, 18, 24, 30, 36	6, 12, 18	6
b.	5 10	5, 10, 15, 20, 25, 30 10, 20, 30, 40, 50, 60	10, 20, 30	10
c.	2 4 6	2, 4, 6, 8, 10, 12 4, 8, 12, 16, 20, 24 6, 12, 18, 24, 30, 36	12	12
d.	2 3 4	2, 4, 6, 8, 10, 12 3, 6, 9, 12, 15, 18 4, 8, 12, 16, 20, 24	12	12

2. Write the first ten multiples of the given numbers and then circle the common multiples :

Ans.

a. Multiples of 2 = **2, 4, 6, 8, 10, 12, 14, 16, 18, 20**

Multiples of 3 = **3, 6, 9, 12, 15, 18, 21, 24, 27, 30**

b. Multiple of 6 = **6, 12, 18, 24, 30, 36, 42, 48, 54, 60**

Multiple of 8 = **8, 16, 24, 32, 40, 48, 56, 64, 72, 80**

3. Find the LCM of the following numbers :

Ans.

a. Multiples of 3 = 3, 6, 9, **12**, 15, 18 .....

Multiples of 4 = 4, 8, **12**, 17, 20, 24 .....

Thus, the least common multiple of 3, 4 is 12.

b. Multiples of 6 = **6**, 12, 18, 24, 30, 36 .....

Multiples of 2 = 2, 4, **6**, 8, 10, 12 .....

Thus, the least common multiple of 6, 2, is 6.

c. Multiples of 4 = 4, 8, 12, 16, 20, 24, 28, 32, **36** .....

Multiples of 9 = 9, 18, 27, **36**, 45 .....

Thus, the LCM of 4 and 9 is 36.

d. Multiples of 12 = 12, 24, **36**, 48, 60, 72 .....
Multiples of 9 = 9, 18, 27, **36**, 45, 54, 65 .....
Multiples of 6 = 6, 12, 18, 24, 30, **36**, 42 .....
Thus, the LCM of 12, 9 and 6 is 36.

e. Multiples of 5 = 5, **10**, 15, 20, 25, 30, 35 .....
Multiples of 10 = **10**, 20, 30, 40, 50, 60 .....
Multiples of 2 = 2, 4, 6, 8, **10**, 12 .....
Thus, the LCM of 5, 10 and 2 is 10.

f. Multiples of 5 = 5, 10, 15, 20, 25, **30**, 35 .....
Multiples of 10 = 10, 20, **30**, 40, 50, 60 .....
Multiples of 15 = 15, **30**, 45, 60, 75, 90 .....
Thus, the LCM of 5, 10 and 15 is 80.

g. Multiples of 7 = 7, 14, 21, 28, 35, 42, 49, 56, **63** .....
Multiples of 9 = 9, 18, 27, 36, 45, 54, **63** .....
Thus, the LCM of 7 and 9 is 63.

h. Multiples of 15 = 15, 30, 45, **60**, 75, 90, 105
Multiples of 20 = 20, 40, **60**, 80
Multiples of 12 = 12, 24, 36, 48, **60**, 72
Thus, the LCM of 15, 20 and 12 is 60.

Exercise 7.3

1. Write the factors of the given numbers :

Ans. a. 12 = **1, 2, 3, 4, 6, 12** b. 18 = **1, 2, 3, 6, 9, 18**
c. 40 = **1, 2, 4, 5 8, 10, 20, 40** d. 36, = **1, 2, 3, 4, 6, 9, 12, 18, 36**
e. 35 = **1, 5, 7, 35** f. 24 = **1, 2, 3, 4, 6, 8, 12, 24**

2. Find the common factors of the following :

Ans. a. Factor of 4 = **1**, **2**, 4
Factor of 10 = **1**, **2**, 5, 10
Thus, the common factors are 1, 2.

b. Factor of 9 = **1**, **3**, **9**
Factor of 27 = **1**, **3**, **9**, 27
Thus, the common factors are 1, 3, 9.

c. Factor of 12 = **1**, **2**, **3**, **4**, 6, 12
Factor of 20 = **1**, **2**, **4**, 5, 10, 20
Thus, the common factors are 1, 2, 4.

d. Factor of 24 = **1**, 2, **3**, 4, 6, 8, 12, 24
Factor of 33 = **1**, **3**, 11
Thus, the common factors are 1 and 3.

e. Factor of 45 = **1**, **3**, **5**, 9, **15**, 45
Factor of 60 = **1**, 2, **3**, 4, **5**, 6, 10, 12, **15**, 20, 30, 60.
Thus, the common factors are 1, 3, 5 and 15.

f. Factor of 12 = **1**, **2**, **3**, 4, **6**, 12
Factor of 18 = **1**, **2**, **3**, **6**, 9, 18
Factor of 36 = **1**, **2**, **3**, 4, **6**, 9, 12, 18, 36
Thus, the common factors are 1, 2, 3 and 6.

g. Factors of 4 = **1**, **2**, 4
Factor of 6 = **1**, **2**, 3, 6
Factor of 8 = **1**, **2**, 4, 8
Thus, the common factors are 1 and 2.

h. Factor of 9 = **1**, **3**, 9
Factor of 3 = **1**, **3**
Factor of 12 = **1**, 2, **3**, 4, 6, 12
Thus, the common factors are 1 and 3.

3. Find the common factors and also find HCF :

Ans. a. Factor of 12 = **1**, 2, **3**, 4, 6, 12
Factor of 15 = **1**, **3**, 5, 15
The common factors of 12 and 15 are 1, 3.
The largest number in this list is 3.
Thus, HCF of 12 and 15 is 3.

b. Factors of 18 = **1**, **2**, **3**, **6**, 9, 18
Factor of 24 = **1**, **2**, **3**, 4, **6**, 8, 12, 24
The common factors of 18 and 24 are 1, 2, 3 and 6.
The largest number in this list is 6.
Thus, HCF of 18 and 24 is 6.

c. Factor of 18 = **1**, **2**, **3**, **6**, **9**, **18**
Factor of 36 = **1**, **2**, **3**, 4, **6**, **9**, 12, **18**, 36
The common factors of 18, 36 are 1, 2, 3, 6, 9 and 18.
The largest number in the list is 18.
Thus, HCF of 18 and 36 is 18.

d. Factor of 27 = **1**, 3, 9, 27
Factor of 13 = **1**, 13
The common factors of 27 and 13 is 1.
Thus, HCF of 27 and 13 is 1.

4. Find the HCF of the following numbers :

Ans. a. Factor of 4 = **1**, **2**, **4**
Factor of 12 = **1**, **2**, 3, **4**, 6, 12
The common factors of 4 and 12 are 1, 2 and 4. The largest number in this list is 4.
Thus, HCF of 4 and 12 is 4.

b. Factors of 20 = **1**, **2**, 4, **5**, **10**, 20
Factor of 50 = **1**, **2**, **5**, **10**, 25, 50
The common factors of 20 and 50 are 1, 2, 5 and 10.
The largest number in this list is 10.
Thus, HCF of 20 and 50 is 10.

c. Factors of 5 = **1**, **5**
Factor of 15 = **1**, 3, **5**, 15
The common factors of 5 and 15 are 1 and 5.
The largest number in this list is 5.
Thus, HCF of 5 and 15 is 5.

d. Factors of 40 = **1**, **2**, **4**, **5**, 8, **10**, **20**, 40
Factors of 60 = **1**, **2**, 3, **4**, **5**, 6, **10**, 12, 15, **20**, 30, 60.
The common factors of 40 and 60 are 1, 2, 4, 5, 10 and 20.
The largest number in this list is 20.
Thus, HCF of 40 and 60 is 20.

e. Factor of 10 = **1**, 2, 5, 10
Factor of 12 = **1**, 2, 3, 4, 6, 12
Factor of 15 = **1**, 3, 5, 15
The common factors of 10, 12 and 15 is 1.
Thus, HCF of 10, 12 and 15 is 1.

f. Factors of 9 = **1**, **3**, 9
Factor of 12 = **1**, 2, **3**, 4, 6, 12
Factor of 18 = **1**, 2, **3**, 6, 9, 18
The common factors of 9, 12, and 18 are 10 and 3
The largest number in this list is 3.
Thus, HCF of 9, 12 and 18 is 3.

g. Factor of 16 = **1**, **2**, **4**, **8**, 16
Factor of 24 = **1**, **2**, 3, **4**, 6, **8**, 12, 24
Factor of 32 = **1**, **2**, **4**, **8**, 16, 32
The common factors of 16, 24 and 32 are 1, 2, 4, 8.
The largest number in this list is 8.
Thus, the HCF of 16, 24 and 32 is 8.

h. Factors of 9 = **1**, **3**, **9**
Factor of 18 = **1**, 2, **3**, 6, **9**, 18
Factor of 72 = **1**, 2, **3**, 4, 6, **9**, 12, 18, 24, 36, 72
The common factors of 9, 18 and 72 are 1, 3 and 9.
The largest number in this list is 9.
Thus, the HCF of 9, 18 and 72 is 9.

5. Are the statement 'True' or 'False' :

Ans. a. False b. True c. True d. True
e. False f. True g. True h. False

Exercise 7.4

1. Tick (✓) the correct boxes :

Ans.

S. No.	Numbers	Divisible by 2	Divisible by 3	Divisible by 4	Divisible by 5	Divisible by 9	Divisible by 10
a.	166	✓					
b.	177		✓				
c.	148	✓		✓			
d.	3,765		✓		✓		
e.	5,255				✓		
f.	2,630	✓					✓

2. Which of the following are divisible by 2?

Ans. a. 428 is divisible by 2
Since, the 428 is an even number.

b. 592 is divisible by 2
Since, the 592 is an even number.

c. 1723 is not divisible by 2.
Since, the 1723 is an odd number.

d. 881 is not divisible by 2.
Since, the 881 is an odd number.

3. Which of these are divisible by 3?

Ans. a. 245 is not divisible by 3.
Since the sum of the digits is 11 (2 + 4 + 5 = 11).
Which is not also divisible by 3.

b. 324 is divisible by 3.
Since the sum of the digits is 9 (3 + 2 + 4 = 9)
Which is also divisible by 3.

c. 618 is divisible by 3.
Since the sum of the digits is 15 (6 + 1 + 8 = 15)
Which is also divisible by 3.

d. 2400 is divisible by 3.
Since the sum of the digits is 6 (2 + 4 + 0 + 0 = 6)
Which is also divisible by 3.

4. Which of these are divisible by 9?

Ans. a. 917 is not divisible by 9
Since, the sum of the digits is 17 (9 + 1 + 7 = 17) and 17 is not divisible by 9.

b. 1800 is divisible by 9 since the sum of the digits is 9 (1 + 8 + 0 + 0 = 9), and 9 is divisible by 9.

c. 1962 is divisible by 9 since the sum of the digits is 18 (1 + 9 + 6 + 2 = 18) and 18 is divisible by 9.

d. 985 is not divisible by 9 since the sum of the digits is 22 (9 + 8 + 5 = 22) and 22 is not divisible by 9.

5. Which of these are divisible by 5?

Ans. a. 870 is divisible by 5 since the last digit is 0. Which is divisible by 5.

b. 658 is not divisible by 5 since the last digit is 8. Which is not divisible by 5.

c. 5950 is divisible by 5 since the last digit is 0. Which is divisible by 5.

d. 1685 is divisible by 5 since the last digit is 5. Which is divisible by 5.

6. Which of these are divisible by 8?

Ans. a. 918 is not divisible by 8 since 918 divisible by 8.

b. 872 is divisible by 8 since 872 divisible by 8.

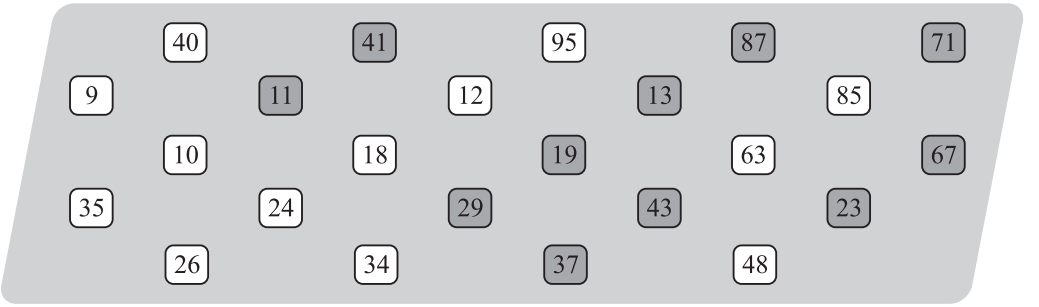
c. 3024 is divisible by 8 since 024 divisible by 8.

d. 1171 is not divisible by 8 since 171 divisible by 8.

Exercise 7.5

1. Colour the prime numbers red and composite numbers blue :

Ans.



2. Write the prime numbers :

Ans.

a.	Between 5 to 20	**7, 11, 13, 17 and 19**
b.	Between 35 to 50	**37, 41, 43, 47**
c.	Between 16 to 69	**17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67**
d.	Between 40 to 100	**41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97**

3. Fill in the blanks :

Ans. a. The smallest prime number is **2**.

b. The number 1 is a **unique** number.

c. The smallest composite number is **4**.

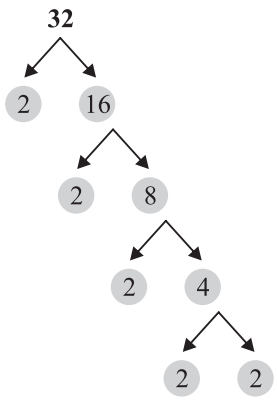
d. Composite number have **3** or more factors.

e. Prime numbers between 1 and to 10 are **2, 3, 5 and 7**.

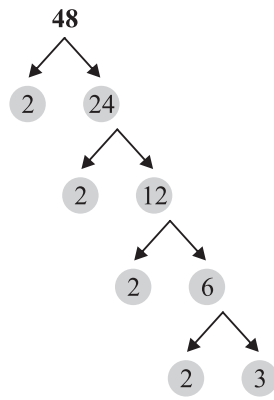
Exercise 7.6

1. Fill in the circles and boxes :

Ans. a.

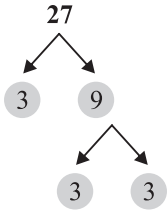


b.

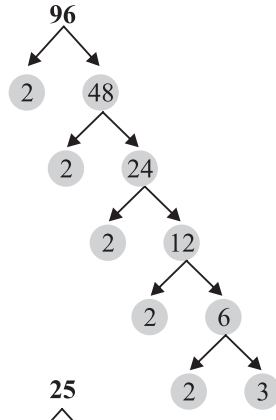


2. Find the prime factorization by factor tree method :

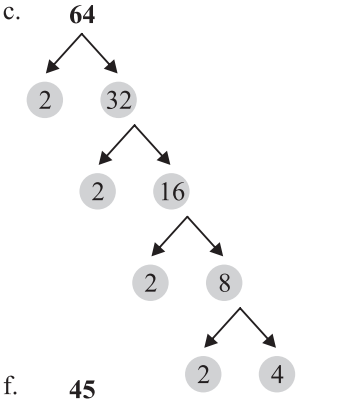
Ans. a.



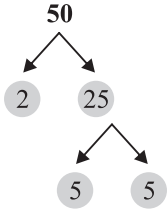
b.



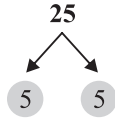
c.



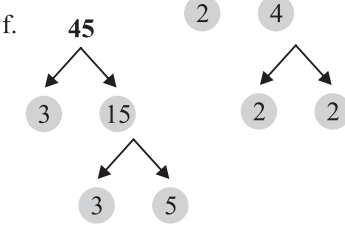
d.



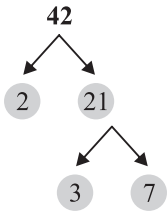
e.



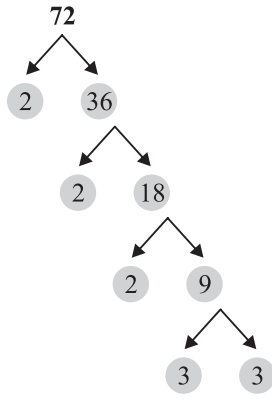
f.



g.



h.



3. Write the prime factorization of the following by long division method ;

Ans. a.

3	63
3	21
7	7
	1

b.

2	56
2	28
2	14
7	7
	1

c.

5	125
5	25
5	5
	1

d.

2	100
2	50
5	25
5	5
	1

Let's Review

1. Tick (✓) the correct choice :

Ans. a. ii b. iii c. i

d. iii e. 9

2. Find the first common multiples of the following. Also write the LCM :

Ans. a. Multiples of 3 = 3, **6**, 9, **12**, 15, **18**, 21, **24**, 27, **30** .....

Multiples of 6 = **6**, **12**, **18**, **24**, **30**, 36,42, 48 .....

So, the first common multiples are 6, 12, **18**, 24 and 30.

And the LCM of 3 and 6 is 6.

b. Multiples of 4 = 4, **8**, 12, **16**, 20, **24**, 28, **32**, 36, **40** .....

Multiples of 8 = **8**, **16**, **24**, **32**, **40**, 48 **56** .....

So, the first common multiples are 8, 16, 24, 32 and 40.

And the LCM of 4 and 8 is 8.

c. Multiples of 10 = 10, 20, **30**, 40, 50, **60**, 70, 80, **90**, 100, 110, **120**, 130, 140, **150**

Multiples of 15 = 15, **30**, 45, **60**, 75, **90**, 105, **120**, 135, **150**

So, the first common multiples are 30, 60, 90, 120 and 150.

And the LCM of 10 and 15 is 30.

d. Multiples of 6 = 6, 12, **18**, 24, 30, **36**, 42, 48, **54**, 60, 66, **72**, 78, 84, **90**

Multiples of 9 = 9, **18**, 27, **36**, 45, **54**, 63, **72**, 81, **90**

So, the first common multiples are 18, 36, 54, 72, 90.

And the LCM of 6 and 9 is 18.

3. Find the common factors of the following :

Ans. a. Factors of 14 = **1**, 2, **7**, 14

Factors of 21 = **1**, 3, **7**, 21

So, the common factors are 1 and 7.

b. Factors of 24 = **1**, **2**, **3**, 4, **6**, 8, 12, 24

Factors of 30 = **1**, **2**, **3**, 5, **6**, 10, 15, 30

So, the common factors of 24 and 30 are 1, 2, 3 and 6.

c. Factors of 15 = **1**, **3**, 5, 15

Factors of 18 = **1**, 2, **3**, 6, 9, 18

So, the common factors of 15 and 18 are 1 and 3.

d. Factors of 72 = **1**, **2**, **3**, **4**, **6**, **8**, 9, **12**, 18, **24**, 36, 72

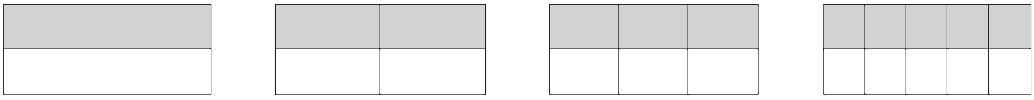
Factors of 48 = **1**, **2**, **3**, **4**, **6**, **8**, **12**, 16, **24**, 48

So, the common factors of 72 and 48 are 1, 2, 3, 4, 6, 8, 12 and 24.

Exercise 8.1

1. Represent $\frac{1}{2}$ in three different ways and write the fraction for each :

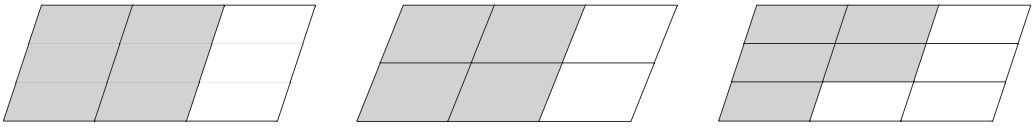
Ans.



$\frac{1}{2}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{5}{10}$

2. Represent $\frac{2}{3}$ in three different ways and write the fraction for each :

Ans.



$\frac{2}{3}$ $\frac{4}{6}$ $\frac{5}{10}$

3. Write three equivalent fractions for the given fractions by multiplying :

Ans. a. $\frac{3}{4} = \frac{3 \times 2}{4 \times 2} = \frac{6}{8}$; $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$ and $\frac{3}{4} = \frac{3 \times 4}{4 \times 4} = \frac{12}{16}$

Thus, $\frac{6}{8}$, $\frac{9}{12}$ and $\frac{12}{16}$ are three equivalent fractions.

b. $\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$; $\frac{2}{5} = \frac{2 \times 3}{5 \times 3} = \frac{6}{15}$ and $\frac{2}{5} = \frac{2 \times 4}{5 \times 4} = \frac{8}{20}$

Thus, $\frac{4}{10}$, $\frac{6}{15}$ and $\frac{8}{20}$ are three equivalent fractions.

c. $\frac{3}{7} = \frac{3 \times 2}{7 \times 2} = \frac{6}{14}$; $\frac{3}{7} = \frac{3 \times 3}{7 \times 3} = \frac{9}{21}$ and $\frac{3}{7} = \frac{3 \times 4}{7 \times 4} = \frac{12}{28}$

Thus, $\frac{6}{14}$, $\frac{9}{21}$ and $\frac{12}{28}$ are three equivalent fractions.

d. $\frac{5}{9} = \frac{5 \times 2}{9 \times 2} = \frac{10}{18}$; $\frac{5}{9} = \frac{5 \times 3}{9 \times 3} = \frac{15}{27}$ and $\frac{5}{9} = \frac{5 \times 4}{9 \times 4} = \frac{20}{36}$

Thus, $\frac{10}{18}$, $\frac{15}{27}$ and $\frac{20}{36}$ are three equivalent fractions.

e. $\frac{4}{11} = \frac{4 \times 2}{11 \times 2} = \frac{8}{22}$; $\frac{4}{11} = \frac{4 \times 3}{11 \times 3} = \frac{12}{33}$ and $\frac{4}{11} = \frac{4 \times 4}{11 \times 4} = \frac{16}{44}$

Thus, $\frac{8}{22}$, $\frac{12}{33}$ and $\frac{16}{44}$ are three equivalent fractions.

f. $\frac{\mathbf{6}}{\mathbf{7}} = \frac{6 \times 2}{7 \times 2} = \frac{12}{14}$; $\frac{\mathbf{6}}{\mathbf{7}} = \frac{6 \times 3}{7 \times 3} = \frac{18}{21}$ and $\frac{\mathbf{6}}{\mathbf{7}} = \frac{6 \times 4}{7 \times 4} = \frac{24}{28}$

Thus, $\frac{12}{14}$, $\frac{18}{21}$ and $\frac{24}{28}$ are three equivalent fractions.

4. Write two equivalent fractions for the given fractions by dividing :

Ans. a. $\frac{\mathbf{18}}{\mathbf{45}} = \frac{18 \div 3}{45 \div 3} = \frac{6}{15}$ and $\frac{\mathbf{18}}{\mathbf{45}} = \frac{18 \div 9}{45 \div 9} = \frac{2}{5}$

Thus, $\frac{6}{15}$ and $\frac{2}{5}$ are two equivalent fractions.

b. $\frac{\mathbf{40}}{\mathbf{80}} = \frac{40 \div 2}{80 \div 2} = \frac{20}{40}$ and $\frac{\mathbf{40}}{\mathbf{80}} = \frac{40 \div 4}{80 \div 4} = \frac{10}{20}$

Thus, $\frac{20}{40}$ and $\frac{10}{20}$ are two equivalent fractions.

c. $\frac{\mathbf{16}}{\mathbf{20}} = \frac{16 \div 2}{20 \div 2} = \frac{8}{10}$ and $\frac{\mathbf{16}}{\mathbf{20}} = \frac{16 \div 4}{20 \div 4} = \frac{4}{5}$

Thus, $\frac{8}{10}$ and $\frac{4}{5}$ are two equivalent fractions.

d. $\frac{\mathbf{15}}{\mathbf{60}} = \frac{15 \div 3}{60 \div 3} = \frac{5}{20}$ and $\frac{\mathbf{15}}{\mathbf{60}} = \frac{15 \div 5}{60 \div 5} = \frac{3}{12}$

Thus, $\frac{5}{20}$ and $\frac{3}{12}$ are two equivalent fractions.

e. $\frac{\mathbf{32}}{\mathbf{64}} = \frac{32 \div 2}{64 \div 2} = \frac{16}{32}$ and $\frac{\mathbf{32}}{\mathbf{64}} = \frac{32 \div 4}{64 \div 4} = \frac{8}{16}$

Thus, $\frac{16}{32}$ and $\frac{8}{16}$ are two equivalent fractions.

f. $\frac{\mathbf{88}}{\mathbf{100}} = \frac{88 \div 2}{100 \div 2} = \frac{44}{50}$ and $\frac{\mathbf{88}}{\mathbf{100}} = \frac{88 \div 4}{100 \div 4} = \frac{22}{25}$

Thus, $\frac{44}{50}$ and $\frac{22}{25}$ are two equivalent fractions.

5. Find the pairs of fractions that are equivalent :

Ans. a. $\frac{\mathbf{2}}{\mathbf{5}}$, $\frac{\mathbf{6}}{\mathbf{15}}$

We cross multiply them

$\frac{2}{5} \times \frac{6}{15}$ $2 \times 15 = 5 \times 6$

$30 = 30$

We get both the products equal.
Hence, they are equivalent fractions.

b. $\frac{\mathbf{2}}{\mathbf{3}}$, $\frac{\mathbf{6}}{\mathbf{12}}$

We cross multiply them

$\frac{2}{3} \times \frac{6}{12}$ $2 \times 12 = 3 \times 6$

$24 \neq 18$

We get both the products different.
Hence, they are not equivalent fractions.

c. $\frac{8}{10}$, $\frac{48}{60}$

We cross multiply them

$\frac{8}{10} \times \frac{48}{60}$ $8 \times 60 = 10 \times 48$

$480 = 480$

We get both the product equal.
Hence, they are equivalent fractions.

d. $\frac{7}{9}$, $\frac{42}{54}$

We cross multiply them

$\frac{7}{9} \times \frac{42}{54}$ $7 \times 54 = 9 \times 42$

$378 = 378$

We get both the product equal.
Hence, they are equivalent fractions.

e. $\frac{3}{2}$, $\frac{16}{12}$

We cross multiply them

$\frac{3}{2} \times \frac{16}{12}$ $3 \times 12 = 2 \times 16$

$36 \neq 32$

We get both the product different.
Hence, they are not equivalent fractions.

f. $\frac{2}{7}$, $\frac{18}{25}$

We cross multiply them

$\frac{2}{7} \times \frac{18}{25}$ $7 \times 18 = 2 \times 25$

$126 \neq 50$

We get both the product different.
Hence, they are not equivalent fractions.

g. $\frac{3}{4}$, $\frac{9}{12}$

We cross multiply them.

$\frac{3}{4} \times \frac{9}{12}$ $3 \times 12 = 4 \times 9$

$36 \neq 76$

We get the product different.
Hence, they are not equivalent fractions.

h. $\frac{5}{6}$, $\frac{20}{24}$

We cross multiply them.

$\frac{5}{6} \times \frac{20}{24}$ $5 \times 24 = 6 \times 20$

$120 = 120$

We get the product equal.
Hence, they are equivalent fractions.

6. Fill in the blanks spaces for the following equivalent fractions :

Ans. a. $\frac{5}{6}$, $\frac{60}{72}$ b. $\frac{1}{6}$, $\frac{7}{42}$ c. $\frac{13}{15}$, $\frac{26}{30}$ d. $\frac{10}{50}$, $\frac{100}{500}$

e. $\frac{15}{21}$, $\frac{5}{7}$ f. $\frac{15}{20}$, $\frac{3}{4}$ g. $\frac{3}{8}$, $\frac{9}{24}$ h. $\frac{36}{66}$, $\frac{6}{11}$

Exercise 8.2

1. Reduce the following fractions into their lowest terms :

Ans. a. $\frac{22}{121}$

$\because$ Prime factors of $22 = 2 \times 11$
Prime factors of $121 = 11 \times 11$
HCF = 11
Since HCF of 22 and 121 = 11
So, we divide both 22 and 121 by 11

$\frac{22 \div 11}{121 \div 11} = \frac{2}{11}$

Thus, the simplest form of $\frac{22}{121}$ is $\frac{2}{11}$.

b. $\frac{36}{81}$

$\because$ Prime factors of $36 = 2 \times 2 \times 3 \times 3$
Prime factors of $81 = 3 \times 3 \times 3 \times 3$
HCF = 9
Since HCF of 36 and 81 = 9
So, we divide both 36 and 81 by 9

$\frac{36 \div 9}{81 \div 9} = \frac{4}{9}$

Thus, the simplest form of $\frac{36}{81}$ is $\frac{4}{9}$.

c. $\frac{12}{18}$

$\because$ Prime factors of $12 = 2 \times 2 \times 3$
Prime factors of $18 = 2 \times 3 \times 3$
HCF $= 2 \times 3 = 6$
Since HCF of 12 and 18 = 6
So, we divide both 12 and 18 by 6

$$\frac{12 \div 6}{18 \div 6} = \frac{2}{3}$$

Thus, the simplest form of $\frac{12}{18}$ is $\frac{2}{3}$.

d. $\frac{15}{20}$

$\because$ Prime factors of $15 = 3 \times 5$
Prime factors of $20 = 2 \times 2 \times 5$
HCF = 5
Since HCF of 15 and 20 = 5
So, we divide both 15 and 20 by 5.

$$\frac{15 \div 5}{20 \div 5} = \frac{3}{4}$$

Thus, the simplest form of $\frac{15}{20}$ is $\frac{3}{4}$.

e. $\frac{35}{45}$

$\because$ Prime factors of $35 = 5 \times 7$
Prime factors of $45 = 3 \times 3 \times 5$
HCF = 5
Since HCF of 35 and 45 = 5
So, we divide both 35 and 45 by 5.

$$\frac{35 \div 5}{45 \div 5} = \frac{7}{9}$$

Thus, the simplest form of $\frac{35}{45}$ is $\frac{7}{9}$.

f. $\frac{49}{63}$

$\because$ Prime factors of $49 = 7 \times 7$
Prime factors of $63 = 3 \times 3 \times 7$
HCF = 7
Since HCF of 49 and 63 = 7
So, we divide both 49 and 63 by 7.

$$\frac{49 \div 7}{63 \div 7} = \frac{7}{9}$$

Thus, the simplest form of $\frac{49}{63}$ is $\frac{7}{9}$.

g. $\frac{48}{64}$

$\because$ Prime factors of $48 = 2 \times 2 \times 2 \times 2 \times 3$
Prime factors of $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$
HCF $= 2 \times 2 \times 2 \times 2 = 16$
Since HCF of 48 and 64 = 16
So, we divide both 48 and 64 by 16.

$$\frac{48 \div 16}{64 \div 16} = \frac{3}{4}$$

Thus, the simplest form of $\frac{48}{64}$ is $\frac{3}{4}$.

h. $\frac{25}{40}$

$\because$ Prime factors of $25 = 5 \times 5$
Prime factors of $40 = 2 \times 2 \times 2 \times 5$
HCF = 5
Since HCF of 25 and 40 is 5.
So, we divide both 25 and 40 by 5.

$$\frac{25 \div 5}{40 \div 5} = \frac{5}{8}$$

Thus, the simplest form of $\frac{25}{40}$ is $\frac{5}{8}$.

i. $\frac{42}{48}$

$\because$ Prime factors of $42 = 2 \times 3 \times 7$
Prime factors of $48 = 2 \times 2 \times 2 \times 2 \times 3$
HCF $= 2 \times 3 = 6$
Since HCF of 42 and 48 is 6.
So, we divide both 42 and 48 by 6.

$$\frac{42 \div 6}{48 \div 6} = \frac{7}{8}$$

Thus, the simplest form of $\frac{42}{48}$ is $\frac{7}{8}$.

j. $\frac{75}{80}$

$\because$ Prime factors of $75 = 3 \times 5 \times 5$
Prime factors of $80 = 2 \times 2 \times 2 \times 2 \times 5$
HCF = 5
Since HCF of 75 and 80 = 5
So, we divide both 75 and 80 by 5.

$$\frac{75 \div 5}{80 \div 5} = \frac{15}{16}$$

Thus, the simplest form of $\frac{75}{80}$ is $\frac{15}{16}$.

k. $\frac{85}{100}$

$\because$ Prime factors of 85 = 5 × 17
Prime factors of 100 = 2 × 2 × 5 × 5
HCF = 5
Since HCF of 85 and 100 = 5
So, we divide both 85 and 100 by 5.

$\frac{85 \div 5}{100 \div 5} = \frac{17}{20}$

Thus, the simplest form of $\frac{85}{100}$ is $\frac{17}{20}$.

l. $\frac{24}{32}$

$\because$ Prime factors of 24 = 2 × 2 × 2 × 3
Prime factors of 32 = 2 × 2 × 2 × 2 × 2
HCF = 8
Since HCF of 24 and 32 = 8
So, we divide both 24 and 32 by 8.

$\frac{24 \div 8}{32 \div 8} = \frac{3}{4}$

Thus, the simplest form of $\frac{24}{32}$ is $\frac{3}{4}$.

Exercise 8.3

1. Fill in the blanks :

Ans. a. **Like** fractions have the same denominator.
b. **Proper fractions** are those fractions in which the numerator is less than the denominator.
c. Fractions in which numerator is greater than the denominator are called **improper fractions**.

2. Tick (✓) the group of like fractions :

Ans. a. $\frac{6}{9}, \frac{8}{9}, \frac{4}{9}$ ✓ b. $\frac{6}{9}, \frac{7}{5}, \frac{8}{7}$ ✗ c. $\frac{8}{7}, \frac{8}{11}, \frac{8}{9}$ ✗

3. Classify the fractions as proper, improper or mixed fractions :

Ans. a, c and f are proper fractions.
b, g and h are improper fractions.
d and e are mixed fractions.

4. Tick (✓) the correct answer :

Ans. a. ii b. i c. iii d. ii

5. Express the following mixed fractions as improper fractions :

Ans. a. $2\frac{6}{5} = \mathbf{\frac{16}{5}}$ b. $1\frac{3}{4} = \mathbf{\frac{7}{4}}$ c. $3\frac{2}{11} = \mathbf{\frac{35}{11}}$

d. $4\frac{7}{10} = \mathbf{\frac{47}{10}}$ e. $6\frac{1}{7} = \mathbf{\frac{43}{7}}$ f. $5\frac{1}{7} = \mathbf{\frac{36}{7}}$

6. Express the following improper fractions as mixed fractions :

Ans. a. $\frac{17}{3} = \mathbf{5\frac{2}{3}}$ b. $\frac{38}{5} = \mathbf{7\frac{3}{5}}$ c. $\frac{64}{13} = \mathbf{4\frac{12}{13}}$

d. $\frac{22}{3} = \mathbf{7\frac{1}{3}}$ e. $\frac{36}{8} = \mathbf{4\frac{4}{8}}$ f. $\frac{29}{8} = \mathbf{3\frac{5}{8}}$

Exercise 8.4

1. Look at the following diagrams. Colour the required number of parts and say which is bigger :

Ans. a. $\frac{1}{2}$  (✓) b. $\frac{1}{4}$  c. $\frac{1}{5}$ 

d. $\frac{1}{3}$  $\frac{1}{4}$  $\frac{1}{2}$  (✓)

e. $\frac{1}{3}$  (✓) $\frac{1}{3}$  (✓) $\frac{1}{4}$ 

f. $\frac{1}{2}$  (✓) $\frac{1}{2}$  (✓) $\frac{1}{4}$ 

2. Insert >, < or = :

Ans. a. $\frac{1}{7} = \frac{1}{7}$ b. $\frac{1}{5} < \frac{3}{5}$ c. $\frac{3}{6} < \frac{3}{5}$ d. $\frac{9}{6} > \frac{7}{6}$

e. $\frac{2}{9} < \frac{4}{9}$ f. $\frac{5}{11} > \frac{3}{11}$ g. $\frac{7}{9} > \frac{6}{9}$ h. $\frac{4}{5} > \frac{2}{5}$

3. Tick (<) the biggest fraction :

Ans. a. $\frac{3}{7} < \frac{5}{9}$ b. $\frac{6}{11} > \frac{4}{13}$ c. $3\frac{2}{5} > 2\frac{4}{5}$ d. $\frac{8}{10} < \frac{11}{13}$

e. $\frac{9}{11} < 2\frac{2}{3}$ f. $\frac{7}{15} < \frac{11}{20}$ g. $1\frac{7}{2} > 2\frac{1}{2}$ h. $\frac{14}{5} > \frac{7}{6}$

i. $\frac{6}{15} < \frac{6}{10}$ j. $\frac{7}{9} > \frac{8}{11}$ k. $3\frac{7}{9} = \frac{34}{9}$ l. $\frac{11}{15} < \frac{9}{12}$

4. Arrange the following in ascending order :

Ans. a. $\mathbf{\frac{8}{12}}$, $\mathbf{\frac{7}{12}}$, $\mathbf{\frac{9}{12}}$ **and** $\mathbf{\frac{5}{12}}$

All the fractions are like. Arrange all the fractions in the ascending order of their numerator as given below.

So, $\frac{5}{12} < \frac{7}{12} < \frac{8}{12} < \frac{9}{12}$

Thus, the given fractions in the ascending order are $\frac{5}{12}$, $\frac{7}{12}$, $\frac{8}{12}$ and $\frac{9}{12}$.

b. $\mathbf{\frac{9}{7}}$, $\mathbf{\frac{4}{5}}$, $\mathbf{\frac{5}{6}}$ **and** $\mathbf{\frac{8}{9}}$

All the fractions are unlike

So, LCM of 7, 5, 6 and 9 = $2 \times 3 \times 3 \times 5 \times 7 = 630$

Now, we convert each one of the given fractions into an equivalent fractions having 630 as denominator, we get

$\frac{9}{7} = \frac{9 \times 90}{7 \times 90} = \frac{810}{630}$; $\frac{4}{5} = \frac{4 \times 126}{5 \times 126} = \frac{504}{630}$;

$\frac{5}{6} = \frac{5 \times 105}{6 \times 105} = \frac{525}{630}$ and $\frac{8}{9} = \frac{8 \times 70}{9 \times 70} = \frac{560}{630}$

$\because \frac{504}{630} < \frac{525}{630} < \frac{560}{630} < \frac{810}{680}$

or $\frac{4}{5} < \frac{5}{6} < \frac{8}{9} < \frac{9}{7}$

$\frac{5}{3}$, $\frac{5}{4}$, $\frac{5}{6}$ **and** $\frac{5}{2}$

We know that, in the given fractions with bigger denominator are smaller, in value so we get.

$\frac{5}{6} < \frac{5}{4} < \frac{5}{3} < \frac{5}{2}$

Thus, $\frac{5}{6}$, $\frac{5}{4}$, $\frac{5}{3}$ and $\frac{5}{2}$ are in ascending order.

d. $\frac{5}{9}$, $\frac{7}{9}$, $\frac{3}{7}$ **and** $\frac{12}{7}$

The given fractions are $\frac{5}{9}$, $\frac{7}{9}$, $\frac{3}{7}$ and $\frac{12}{7}$.

LCM of 9, 9, 7 and 7 = 3 × 3 × 7 = 63

Now, we convert each one of the given fraction into an equivalent fraction having 63 as denominator, we get

$\frac{5}{9} = \frac{5 \times 7}{9 \times 7} = \frac{35}{63}$; $\frac{7}{9} = \frac{7 \times 7}{9 \times 7} = \frac{49}{63}$; $\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63}$

and $\frac{12}{7} = \frac{12 \times 9}{7 \times 9} = \frac{108}{63}$

$\because \frac{27}{63} < \frac{35}{63} < \frac{49}{63} < \frac{108}{63}$

or $\frac{3}{7} < \frac{5}{9} < \frac{7}{9} < \frac{12}{7}$

Thus, the given fraction in the ascending order are $\frac{3}{7}$, $\frac{5}{9}$, $\frac{7}{9}$ and $\frac{12}{7}$.

e. $\frac{8}{9}$, $\frac{8}{3}$, $\frac{8}{7}$ **and** $\frac{8}{5}$

Since numerator are same. So, arrange all the fractions in the descending order of their denominator.

$\because \frac{8}{9} < \frac{8}{7} < \frac{8}{5} < \frac{8}{3}$

Thus, $\frac{8}{9}$, $\frac{8}{7}$, $\frac{8}{5}$ and $\frac{8}{3}$ are in ascending order.

f. $2\frac{5}{7}$, $2\frac{5}{3}$, $2\frac{6}{7}$ **and** $2\frac{8}{3}$

We convert them into improper fractions first.

$\frac{19}{7}$, $\frac{11}{3}$, $\frac{20}{7}$ and $\frac{14}{3}$

So, LCM of 7, 3, 7 and 3 = 3 × 7 = 21

Now, we convert each one of the given fractions into an equivalent fraction having 21 as denominator, we get

$\frac{19}{7} = \frac{19 \times 3}{7 \times 3} = \frac{57}{21}$; $\frac{11}{3} = \frac{11 \times 7}{3 \times 7} = \frac{77}{21}$;

$\frac{20}{7} = \frac{20 \times 3}{7 \times 3} = \frac{60}{21}$ and $\frac{14}{3} = \frac{14 \times 7}{3 \times 7} = \frac{98}{21}$

$\because \frac{57}{21} < \frac{60}{21} < \frac{77}{21} < \frac{98}{21}$

or $\frac{19}{7} < \frac{20}{7} < \frac{11}{3} < \frac{14}{3}$

Thus, $\frac{19}{7}$, $\frac{20}{7}$, $\frac{11}{3}$ and $\frac{14}{3}$ are in ascending order.

5. Arrange the following in descending order :

Ans. a. $\frac{7}{11}$, $\frac{5}{11}$, $\frac{6}{11}$ **and** $\frac{9}{11}$

All the fractions are like. Arrange all the fractions in the descending order of their numerator as given below :

$\frac{9}{11} > \frac{7}{11} > \frac{6}{11} > \frac{5}{11}$

Thus, $\frac{9}{11}$, $\frac{7}{11}$, $\frac{6}{11}$ and $\frac{5}{11}$ are in descending order.

b. $\frac{3}{9}$, $\frac{8}{9}$, $\frac{5}{7}$ **and** $\frac{9}{7}$

The given fractions are $\frac{3}{9}$, $\frac{8}{9}$, $\frac{5}{7}$ and $\frac{9}{7}$.

LCM of 9, 9, 7 and 7 = $3 \times 3 \times 7 = 63$

Now, we convert each of the given fractions into an equivalent fraction having 63 as denominator, we get

$\frac{3}{9} = \frac{3 \times 7}{9 \times 7} = \frac{21}{63}$; $\frac{8}{9} = \frac{8 \times 7}{9 \times 7} = \frac{56}{63}$;

$\frac{5}{7} = \frac{5 \times 9}{7 \times 9} = \frac{45}{63}$ and $\frac{9}{7} = \frac{9 \times 9}{7 \times 9} = \frac{81}{63}$

$\because \frac{81}{63} > \frac{56}{63} > \frac{45}{63} > \frac{21}{63}$

or $\frac{9}{7} > \frac{8}{9} > \frac{5}{7} > \frac{3}{9}$

Thus, $\frac{9}{7}$, $\frac{8}{9}$, $\frac{5}{7}$ and $\frac{3}{9}$ are in descending order.

c. $2\frac{2}{7}$, $3\frac{4}{7}$, $1\frac{6}{7}$ **and** $1\frac{3}{7}$

We convert them into improper fractions first

$\frac{16}{7} > \frac{25}{7} > \frac{13}{7}$ and $\frac{10}{7}$

Arrange all the fractions in the descending order of their numerator

$\frac{25}{7} > \frac{16}{7} > \frac{13}{7} > \frac{10}{7}$

or $3\frac{4}{7} > 2\frac{2}{7} > 1\frac{6}{7} > 1\frac{3}{7}$

Thus, $3\frac{4}{7}$, $2\frac{2}{7}$, $1\frac{6}{7}$ and $1\frac{3}{7}$ are in descending order.

d. $\mathbf{\frac{2}{3}}$, $\mathbf{\frac{2}{5}}$, $\mathbf{\frac{2}{7}}$ **and** $\mathbf{\frac{2}{9}}$

Since, numerator are same. So, arrange all the fractions in the descending order of their denominator.

$\frac{2}{3} > \frac{2}{5} > \frac{2}{7} > \frac{2}{9}$

Thus, $\frac{2}{3}$, $\frac{2}{5}$, $\frac{2}{7}$ and $\frac{2}{9}$ are in descending order.

e. $\mathbf{7\frac{5}{6}}$, $\mathbf{7\frac{15}{19}}$, $\mathbf{7\frac{1}{19}}$ **and** $\mathbf{7\frac{1}{6}}$

We convert them into improper fractions first.

$\frac{47}{6}$, $\frac{148}{19}$, $\frac{134}{19}$ and $\frac{43}{6}$

LCM of 6, 19, 19 and 6 = $2 \times 3 \times 19 = 114$

Now, we convert each of the given fractions into an equivalent fraction having 114 as denominator, we get

$\frac{47}{6} = \frac{47 \times 19}{6 \times 19} = \frac{893}{114}$; $\frac{148}{19} = \frac{148 \times 6}{19 \times 6} = \frac{888}{114}$;

$\frac{134}{19} = \frac{134 \times 6}{19 \times 6} = \frac{804}{114}$ and $\frac{43}{6} = \frac{43 \times 19}{6 \times 19} = \frac{817}{114}$

$\because \frac{893}{114} > \frac{888}{114} > \frac{817}{114} > \frac{804}{114}$

or $\frac{47}{6} > \frac{148}{19} > \frac{43}{19} > \frac{134}{6}$

or $7\frac{5}{6} > 7\frac{15}{19} > 7\frac{1}{6} > 7\frac{1}{19}$

Thus, $7\frac{5}{6}$, $7\frac{15}{19}$, $7\frac{1}{6}$ and $7\frac{1}{19}$ are in descending order.

f. $\mathbf{7\frac{3}{5}}$, $\mathbf{\frac{18}{5}}$, $\mathbf{\frac{6}{7}}$ **and** $\mathbf{1\frac{4}{7}}$

We convert them into improper fractions first

$\frac{38}{5}$, $\frac{18}{5}$, $\frac{6}{7}$ and $\frac{11}{7}$

LCM of 5, 5, 7 and 7 = 5 × 7 = 35

Now, we convert each of the given fractions into an equivalent fraction having 35 as denominator, we get

$\frac{38}{5} = \frac{38 \times 7}{5 \times 7} = \frac{266}{35}$; $\frac{18}{5} = \frac{18 \times 7}{5 \times 7} = \frac{126}{35}$;

$\frac{6}{7} = \frac{6 \times 5}{7 \times 5} = \frac{30}{35}$ and $\frac{11}{7} = \frac{11 \times 5}{7 \times 5} = \frac{55}{35}$

$\because \frac{266}{35} > \frac{126}{35} > \frac{55}{35} > \frac{30}{35}$

or $\frac{38}{5} > \frac{18}{5} > \frac{11}{7} > \frac{6}{7}$

or $7\frac{3}{5} > \frac{18}{5} > 1\frac{4}{7} > \frac{6}{7}$

Thus, $7\frac{3}{5}$, $\frac{18}{5}$, $1\frac{4}{7}$ and $\frac{6}{7}$ are in descending order.

Hots

Solve the following :

Ans. a. $\mathbf{\frac{13}{15} - \frac{4}{15} + \frac{2}{15}}$

$= \frac{13}{15} + \frac{2}{15} - \frac{4}{15} = \frac{13+2}{15} - \frac{4}{15} = \frac{15}{15} - \frac{4}{15} = \frac{15-4}{15} = \frac{11}{15}$

b. $\mathbf{\frac{6}{13} + \frac{2}{13} - \frac{1}{13}}$

$= \frac{6+2}{13} - \frac{1}{13} = \frac{8}{13} - \frac{1}{13} = \frac{8-1}{13} = \frac{7}{13}$

c. $\mathbf{\frac{14}{17} - \frac{8}{17} + \frac{3}{17}}$

$= \frac{14}{17} + \frac{3}{17} - \frac{8}{13} = \frac{14+3}{17} - \frac{8}{17} = \frac{17}{17} - \frac{8}{17}$

$= \frac{17-8}{17} = \frac{9}{17}$

Exercise 8.5

Solve the following :

Ans. 1. Money spend on food by Naman $= \frac{1}{3}$

Money spent on books by Naman $= \frac{1}{4}$

Total spent of the money $= \frac{1}{4} + \frac{1}{3} = \frac{3+4}{12} = \frac{7}{12}$

Hence, he spent $\frac{7}{12}$ in all.

2. John bought of ribbon $= \frac{2}{5}$ m

Naveen bought of ribbon $= \frac{1}{2}$ m

Since $\frac{2}{5} < \frac{1}{2}$

So, difference $= \left(\frac{1}{2} - \frac{2}{5}\right)$ m $= \left(\frac{5-4}{10}\right)$ m $= \frac{1}{10}$ m

Naveen bought longer ribbon by $\frac{1}{10}$ m.

3. Riti completed her Maths home work $= \frac{1}{6}$ hour

Riti completed her Science home work $= \frac{3}{10}$ hour

Total time taken $= \left(\frac{1}{6} + \frac{3}{10}\right)$ hour

$= \left(\frac{5+3}{30}\right)$ h $= \frac{8}{30}$ h

$= \frac{4}{15}$ hour

Hence, she took $\frac{4}{15}$ hours in all to complete both.

4. Weight of snacker's packet $= \frac{3}{5}$ kg

Number of packet $= 10$

So, total weight of snackers's packet $= \frac{3}{5} \times 10$ kg

$= 6$ kg

Hence, 6 kg was the total weight of the packets of snacks.

5. Capacity of three vessels = $\frac{1}{4}\ l,\ \frac{3}{8}\ l,\ \frac{9}{16}\ l$

So, total capacity of three vessels = $\left(\frac{1}{4} + \frac{3}{8} + \frac{9}{16}\right) l$

= $\left(\frac{4+6+9}{16}\right) l$ = $\frac{19}{16}\ l$ = $1\frac{3}{16}\ l$

Hence, $1\frac{3}{16}\ l$ is total milk with the milkman.

6. Rashmi collected of the coins = $\frac{3}{11}$

Her friend collected of the coins = $\frac{4}{11}$

Total coins = $\frac{3}{11} + \frac{4}{11}$

= $\frac{3+4}{11}$ = $\frac{7}{11}$

Hence, they collected $\frac{7}{11}$ coins altogether.

7. Fabian walks = $\frac{7}{13}$

Fabian Jogs = $\frac{3}{13}$

Total distance covered by Fabian = $\frac{7}{13} + \frac{3}{13}$

= $\frac{7+3}{13}$ = $\frac{10}{13}$

Fabian traveled $\frac{10}{13}$ past in a day.

Let's Review

1. Write three equivalent fractions for the given fractions by multiplying :

Ans. a. Next three fractions equivalent to $\frac{5}{7}$ are :

$\frac{5\times2}{7\times2} = \frac{10}{14}$; $\frac{5\times3}{7\times3} = \frac{15}{21}$ and $\frac{5\times4}{7\times4} = \frac{20}{28}$

Hence, the required fractions are $\frac{10}{14}$, $\frac{15}{21}$ and $\frac{20}{28}$.

b. Next three fractions equivalent to $\frac{8}{11}$ are :

$\frac{8\times2}{11\times2} = \frac{16}{22}$; $\frac{8\times3}{11\times3} = \frac{24}{33}$ and $\frac{8\times4}{11\times4} = \frac{32}{44}$

Hence, the required fractions are $\frac{16}{22}$, $\frac{24}{33}$ and $\frac{32}{44}$.

c. Next three fractions equivalent to $\frac{7}{9}$ are :

$\frac{7 \times 2}{9 \times 2} = \frac{14}{18}$; $\frac{7 \times 3}{9 \times 3} = \frac{21}{27}$ and $\frac{7 \times 4}{9 \times 4} = \frac{28}{36}$

Hence, the required fractions are $\frac{14}{18}$, $\frac{21}{27}$ and $\frac{28}{36}$.

d. Next three fractions equivalent to $\frac{3}{14}$ are :

$\frac{3 \times 2}{14 \times 2} = \frac{6}{28}$; $\frac{3 \times 3}{14 \times 3} = \frac{9}{42}$ and $\frac{3 \times 4}{14 \times 4} = \frac{12}{56}$

Hence, the required fractions are $\frac{6}{28}$, $\frac{9}{42}$ and $\frac{12}{56}$.

2. Convert to improper fractions :

Ans. a. $2\frac{3}{5} = \frac{2 \times 5 + 3}{5} = \frac{10 + 3}{5} = \frac{13}{5}$

b. $4\frac{1}{3} = \frac{4 \times 3 + 1}{3} = \frac{12 + 1}{3} = \frac{13}{3}$

c. $6\frac{4}{5} = \frac{6 \times 5 + 4}{5} = \frac{30 + 4}{5} = \frac{34}{5}$

d. $5\frac{3}{9} = \frac{5 \times 9 + 3}{9} = \frac{45 + 3}{9} = \frac{48}{9}$

3. Convert to mixed fractions :

Ans. a. $\frac{11}{3}$

$$\begin{array}{r} 3 \\ 3\overline{)\,11} \\ -\,9 \\ \hline 2 \end{array}$$

i.e., 3 whole and $\frac{2}{3}$ more or $3\frac{2}{3}$.

b. $\frac{15}{7}$

$$\begin{array}{r} 2 \\ 7\overline{)\,15} \\ -\,14 \\ \hline 1 \end{array}$$

i.e., 2 whole and $\frac{1}{7}$ more or $2\frac{1}{7}$.

c. $\frac{17}{3}$

$$\begin{array}{r} 5 \\ 3\overline{)\,17} \\ -\,15 \\ \hline 2 \end{array}$$

i.e., 5 whole and $\frac{2}{3}$ more or $5\frac{2}{3}$.

d. $\frac{21}{18}$

$$\begin{array}{r} 1 \\ 18\overline{)\,21} \\ -\,18 \\ \hline 3 \end{array}$$

i.e., 1 whole and $\frac{3}{18}$ more or $1\frac{2}{18}$.

4. Put the correct sign < , > or = :

Ans. a. $\frac{4}{9} < \frac{6}{9}$ b. $\frac{11}{15} > \frac{8}{15}$ c. $\frac{13}{7} > \frac{9}{17}$

d. $\frac{2}{8} < \frac{2}{3}$ e. $5\frac{1}{9} > 5\frac{1}{3}$ f. $3\frac{2}{8} = \frac{26}{3}$

5. Solve and reduce to the lowest term :

Ans. a. $\frac{14}{17} + \frac{1}{17} = \frac{14+1}{17} = \frac{15}{17}$

b. $\frac{12}{13} - \frac{8}{13} = \frac{12-8}{13} = \frac{4}{13}$

c. $\frac{5}{7} - \frac{5}{9} = \frac{5\times 9 - 5\times 7}{63}$ ($\because$ LCM of 7 and 9 = 63)

$\therefore = \frac{45-35}{63} = \frac{10}{63}$

d. $9\frac{1}{2} + 11\frac{3}{4} = \frac{9\times 2+1}{2} + \frac{11\times 4+3}{4}$

$= \frac{18+1}{2} + \frac{44+3}{4} = \frac{19}{2} + \frac{47}{4}$

$= \frac{19\times 2+47}{4}$ ($\because$ LCM of 2 and 4 = 4)

$\therefore = \frac{38+47}{4} = \frac{85}{4} = 21\frac{1}{4}$

e. $\frac{1}{8} + 1\frac{1}{5} = \frac{1}{8} + \frac{1\times 5+1}{5}$

$= \frac{1}{8} + \frac{5+1}{5}$

$= \frac{1}{8} + \frac{6}{5}$

$= \frac{5+8\times 6}{40}$ ($\because$ LCM of 8 and 5 = 40)

$\therefore = \frac{5+48}{40} = \frac{53}{40} = 1\frac{13}{40}$

f. $2\frac{1}{4} - 1\frac{2}{3} = \frac{2\times 4+1}{4} - \frac{1\times 3+2}{3}$

$= \frac{8+1}{4} - \frac{3+2}{3}$

$= \frac{9}{4} - \frac{5}{3}$

$= \frac{9\times 3-5\times 4}{12}$ ($\because$ LCM of 4 and 3 = 12)

$\therefore = \frac{27-20}{12} = \frac{7}{12}$

g. $\frac{5}{8} - \frac{1}{2} = \frac{5-4}{8}$ ($\because$ LCM of 8 and 2 = 8)

$= \frac{1}{8}$

h. $1\frac{1}{5} - \frac{7}{10} = \frac{1 \times 5 + 1}{5} - \frac{7}{10}$

$= \frac{5+1}{5} - \frac{7}{10}$

$= \frac{6 \times 2 - 7}{10} = \frac{12-7}{10} = \frac{5}{10}$

6. Solve the following :

Ans. a. Anju walked before lunch $= \frac{4}{5}$ mile

Anju walked after lunch $= \frac{6}{5}$ mile

So, total distance covered by Anju $= \frac{4}{5} + \frac{6}{5}$

$= \frac{4+6}{5} = \frac{10}{5}$

$=$ 2 miles.

Hence, she walked 2 miles in all.

b. Number of snacks packets $=$ 10

Weight of each packet $= \frac{3}{5}$ kg

So, total weight of 10 packets $= 10 \times \frac{3}{5}$ kg

$=$ 2 × 3 kg $=$ 6 kg

Hence, 6 kg was the total weight of 10 packets of snacks.

c. Mrs Kapur bought sugar $=$ 2 kg

She used sugar to bake a cake $= 1\frac{3}{5}$ kg

Sugar left $= 2 \text{ kg} - 1\frac{3}{5}$ kg

$= \left(2 - \frac{8}{5}\right)$kg

$= \left(\frac{10-8}{5}\right)$kg $= \frac{2}{5}$ Kg

Hence, $\frac{2}{5}$ kg sugar is left.

d. Pawani completed her home work in the afternoon $= \frac{3}{5}$

Pawani completed her home work in the evening $= \frac{1}{4}$

Total homework $= \frac{3}{5} + \frac{1}{4} = \frac{3 \times 4 + 5}{20}$

$= \frac{12 + 5}{20} = \frac{17}{20}$

So, $\frac{17}{20}$ home work is done.

Homework left $= 1 - \frac{17}{20} = \frac{20 - 17}{20} = \frac{3}{20}$

e. Tanu has been told to drink of milk every day $=$ 1 litre

But she drank only $= \frac{5}{8}$ litre

So, milk left $= \left(1 - \frac{5}{8}\right)$litre

$= \left(\frac{8 - 5}{8}\right)$litre $= \frac{3}{8}$ litre.

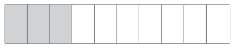
Hence, $\frac{3}{8}$ litre of milk is still left.

Unit Nine : Decimals

Exercise 9.1

1. Write the decimal fraction for the following :

Ans. a.

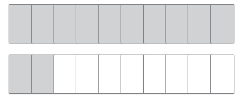


0.3

b.

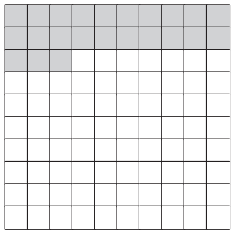
2.5

c.



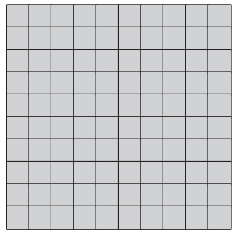
1.2

d.



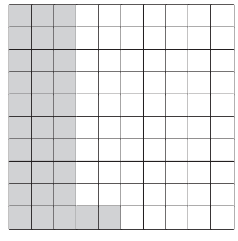
0.23

e.



1

f.



0.32

2. Express the following as decimal numbers :

Ans. a. $\frac{3}{10}$ = 0.3 b. $\frac{9}{100}$ = 0.09 c. $\frac{13}{100}$ = 0.13 d. $\frac{21}{100}$ = 0.21

e. $\frac{40}{100}$ = 0.40 f. $\frac{43}{1000}$ = 0.043 g. $\frac{5}{10}$ = 0.5 h. $\frac{6}{10}$ = 0.6

i. $\frac{7}{100}$ = 0.07 j. $\frac{28}{100}$ = 0.28 k. $\frac{2}{1000}$ = 0.002 l. $\frac{15}{1000}$ = 0.015

3. Fill in the blanks :

Ans.

	Th	H	T	O	·	t	h	th
$92\frac{47}{100}$			9	2	.	4	7	
$75\frac{56}{1000}$			**7**	**5**	.	**0**	**5**	**6**
$941\frac{4}{10}$		**9**	**4**	**1**	.	**4**		
$728\frac{55}{100}$		7	2	8	·	5	5	
$1926\frac{45}{100}$	**1**	**9**	**2**	**6**	·	**4**	**5**	
$2931\frac{93}{1000}$	**2**	**9**	**3**	**1**	·	**0**	**9**	**3**

4. Read the following decimals in the correct form and write them down in words :

Ans. a. 0.03 **point zero three** b. 0.43 **point four three**

c. 2.83 **Two point eight three** d. 53.91 **Fifty-three point nine-one**

e. 0.004 **point zero zero four** f. 7.816 **Saven point eight one six**

5. Write in decimals :

Ans. a. 1.47 b. 18.956 c. 7.45 d. 24.099

e. 69.452 f. 165.007 g. 37.651 h. 200.0733

Exercise 9.2

1. Write these mixed numbers as decimals :

Ans. a. $15\frac{4}{10}$ = 15.4 b. $76\frac{1}{10}$ = 76.1

c. $195\frac{2}{10}$ = 195.2 d. $62\frac{3}{100}$ = 62.03

e. $4128\frac{7}{100}$ = 4128.07 f. $1395\frac{9}{1000}$ = 1395.009

2. Expand these decimal numbers :

Ans. a. **9.96** = $9 + \frac{9}{10} + \frac{6}{100}$ or $9 + 0.9 + 0.09$

b. **0.135** = $\frac{1}{10} + \frac{3}{100} + \frac{5}{1000}$ or 0.1 + 0.03 + 0.005

c. **0.507** = $\frac{5}{10} + \frac{7}{1000}$ or 0.5 + 0.07

d. **0.986** = $\frac{9}{10} + \frac{8}{100} + \frac{6}{1000}$ or 0.9 + 0.08 + 0.006

e. **1.208** = $1 + \frac{2}{10} + \frac{8}{1000}$ or 1 + 0.2 + 0.008

f. **27.003** = $20 + 7 + \frac{3}{1000}$ or 2 + 7 + 0.003

g. **423.107** = $400 + 20 + 3 + \frac{1}{10} + \frac{7}{1000}$ or 400 + 20 + 3 + 0.1 + 0.007

3. Convert the expanded form to a decimal number :

Ans. a. 748.405 b. 176.902 c. 36.093 d. 597.123
e. 63.0124 f. 52.456 g. 265.507

4. Find the place value of the underlined digit :

Ans. a. The place value of 8 in the 3.814 = $\frac{8}{10}$ = 0.8

b. The place value of 7 in the 7.218 = 7.

c. The place value of 4 in the 31.406 = $\frac{4}{10}$ = 0.4.

d. The place value of 5 in the 365.458 = $\frac{5}{100}$ = 0.05

e. The place value of first 6 in the 3.966 = $\frac{6}{1000}$ = 0.006

f. The place value of 2 in the 91.012 = $\frac{2}{1000}$ = 0.002.

g. The place value of 1 in the 27.419 = $\frac{1}{100}$ = 0.01.

h. The place value of 8 in the 80.012 = 80.

i. The place value of 1 in the 367.159 = $\frac{1}{10}$ = 0.1.

Exercise 9.3

1. State 'True' or 'False' :

Ans. a. False b. True c. True
d. True e. False f. True

2. Write two equivalent decimal numbers of the following :

Ans. a. 0.7 = **0.70** = **0.700** b. 2.17 = **2.170** = **2.1700**
c. 0.89 = **0.890** = **0.8900** d. 157.1 = **157.10** = **157.100**
e. 97.20 = **97.200** = **97.2000** f. 290.71 = **290.710** = **290.7100**

Exercise 9.4

1. Write >, < or = :

Ans. a. $\frac{1}{10} > \frac{1}{1000}$ b. 0.07 < 0.6 c. 0.60 < 0.9

d. 0.089 < 0.1 e. 0.073 < 0.08 f. 7.380 = 7.38

2. Circle the smallest decimal number :

Ans. a. 8.61, 81.6, 18.6, **8.6,** 86.0 b. 91.5, 9.15, 9.51, 9.05, **9.01**

c. **3.76,** 6.73, 67.3, 63.7, 7.63 d. 7.99, 9.79, 79.7, 99.7, **7.97**

3. Circle the biggest decimal number :

Ans. a. 3.048, 3.49, **3.5,** 3.05, 2.75 b. **72.1,** 7.21, 7.021, 72.01, 0.721

c. 234.4, **243.4,** 4.243, 243.3, 78.43 d. 43.217, 73.124, 41.271, **74.12,** 3.60

4. Arrange in ascending order :

Ans. a. 16.03, 16.30 and 16.303

Converting the given decimals into like decimals, we get

16.030, 16.300 and 16.303

Clearly, $16.030 < 16.300 < 16.303$

$\therefore$ $16.03 < 16.30 < 16.303$

Hence, the given decimals in ascending order are 16.03, 16.30 and 16.303.

b. 301.5, 30.15 and 301.51

Converting the given decimals into like decimals, we get

301.50, 30.15 and 301.51

Clearly, $30.15 < 301.50 < 301.51$

$\therefore$ $30.15 < 301.5 < 301.51$

Hence, the given decimals in ascending order are 30.15, 301.5 and 301.51

c. 39.697, 38.597 and 39.797

Converting the given decimals into like decimals, we get

Clearly, $38.597 < 39.697 < 39.797$

$\therefore$ $38.597 < 39.697 < 39.797$

Hence, the given decimals in ascending order are 38.597, 39.697 and 39.797.

d. 14.96, 13.96 and 15.96

Clearly, $13.96 < 14.96 < 15.96$

$\therefore$ $13.96 < 14.96 < 15.96$

Hence, the given decimals in ascending order are 13.96, 14.96 and 15.96.

5. Arrange in descending order :

Ans. a. 62.35. 62.53 and 62.053

Converting the given decimals into like decimals, we get

62.350, 62.530 and 62.053

Clearly, $62.530 > 62.350 > 62.053$

$\therefore$ $62.53 > 62.35 > 62.053$

Hence, the given decimals in descending order are 62.053, 62.35 and 62.53.

b. 73.09, 72.9 and 37.99

Converting the given decimals into like decimals, we get

73.09, 73.90 and 37.00

Clearly, $73.90 > 73.09 > 37.99$

$\therefore$ $73.9 > 73.09 > 37.99$

Hence, the given decimals in descending order are 73.9, 73.09 and 37.99

c. 11.07, 11.701 and 11.107

Converting the given decimals into like decimals, we get

11.070, 11.701 and 11.107

Clearly, $11.701 > 11.107 > 11.070$

$\therefore$ $11.701 > 11.107 > 11.07$.

Hence, the given decimals in descending order are 11.701, 11.107 and 11.07.

d. 278.4, 278.401 and 278.104

Converting the given decimals into like decimals, we get.

278.400 > 278.401 and 278.104.

Clearly, $278.401 > 278.400 > 278.104$.

$\therefore$ $278.401 > 278.4 > 278.104$.

Hence, the given decimals in descending order are 278.401, 278.4 and 278.104

Exercise 9.5

1. Add the following :

Ans. a.
$$\begin{array}{r} 4.189 \\ +\ 2.140 \\ \hline 6.329 \end{array}$$

b.
$$\begin{array}{r} 0.05 \\ +\ 2.13 \\ \hline 2.18 \end{array}$$

c.
$$\begin{array}{r} 5.490 \\ +\ 76.146 \\ \hline 81.636 \end{array}$$

d.
$$\begin{array}{r} 107.48 \\ +\ \ 8.37 \\ \hline 115.85 \end{array}$$

e.
$$\begin{array}{r} 3.850 \\ 5.483 \\ +\ 1.290 \\ \hline 10.623 \end{array}$$

f.
$$\begin{array}{r} 9.916 \\ 16.815 \\ +\ 5.817 \\ \hline 32.548 \end{array}$$

g.
$$\begin{array}{r} 213.945 \\ 5.080 \\ +\ 16.290 \\ \hline 235.315 \end{array}$$

h.
$$\begin{array}{r} 3.935 \\ 3.819 \\ +\ 1.040 \\ \hline 8.794 \end{array}$$

i.
$$\begin{array}{r} 29.760 \\ 8.412 \\ +137.800 \\ \hline 175.972 \end{array}$$

j.
$$\begin{array}{r} 187.615 \\ 21.206 \\ +120.511 \\ \hline 329.332 \end{array}$$

k.
$$\begin{array}{r} 2.008 \\ 12.800 \\ +\ 74.080 \\ \hline 88.888 \end{array}$$

l
$$\begin{array}{r} 238.132 \\ 512.619 \\ +\ 21.206 \\ \hline 771.957 \end{array}$$
.

m.
$$\begin{array}{r} 27.630 \\ 18.290 \\ +317.317 \\ \hline 363.237 \end{array}$$

n.
$$\begin{array}{r} 101.001 \\ 202.020 \\ +333.312 \\ \hline 636.333 \end{array}$$

o.
$$\begin{array}{r} 135.007 \\ 25.100 \\ +147.007 \\ \hline 307.114 \end{array}$$

p.
$$\begin{array}{r} 512.209 \\ 148.007 \\ +\ \ .008 \\ \hline 660.224 \end{array}$$

Exercise 9.6

1. Subtract the following :

Ans. a.
$$\begin{array}{r} 960.31 \\ -\ 27.82 \\ \hline 932.49 \end{array}$$

b.
$$\begin{array}{r} 363.11 \\ -\ 27.52 \\ \hline 335.59 \end{array}$$

c.
$$\begin{array}{r} 838.51 \\ -\ 211.62 \\ \hline 626.89 \end{array}$$

d.
$$\begin{array}{r} 101.51 \\ -\ 21.30 \\ \hline 80.21 \end{array}$$

e.
$$\begin{array}{r} 555.55 \\ -\ 333.66 \\ \hline 221.89 \end{array}$$

f.
$$\begin{array}{r} 891.06 \\ -\ 29.98 \\ \hline 861.08 \end{array}$$

g.
$$\begin{array}{r} 373.26 \\ -\ 24.85 \\ \hline 348.41 \end{array}$$

h.
$$\begin{array}{r} 271.005 \\ -\ 95.938 \\ \hline 175.067 \end{array}$$

i.
$$\begin{array}{r} 76.199 \\ -\ 48.587 \\ \hline 27.612 \end{array}$$

j.
$$\begin{array}{r} 297.045 \\ -248.904 \\ \hline 48.141 \end{array}$$

k.
$$\begin{array}{r} 162.980 \\ -145.406 \\ \hline 17.574 \end{array}$$

l.
$$\begin{array}{r} 87.409 \\ -\ 49.998 \\ \hline 37.411 \end{array}$$

m.
$$\begin{array}{r} 261.709 \\ -\ 119.999 \\ \hline 141.710 \end{array}$$

n.
$$\begin{array}{r} 94.980 \\ -\ 59.897 \\ \hline 35.083 \end{array}$$

o.
$$\begin{array}{r} 434.288 \\ -\ 211.499 \\ \hline 222.780 \end{array}$$

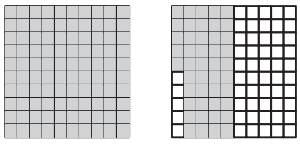
p.
$$\begin{array}{r} 709.261 \\ -\ 119.987 \\ \hline 589.274 \end{array}$$

Let's Review

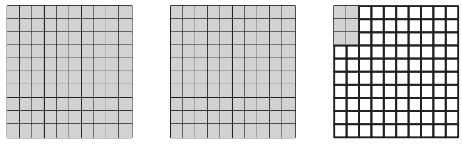
1. Tick (✓) the correct choice.

Ans. a. i b. iii c. ii d. iii e. iii

2. Write the decimal for the following ;

Ans. a. 

1.45

b. 

2.06

3. Write in expanded form :

Ans. a. $39.74 = 30 + 9 + \frac{7}{10} + \frac{4}{100}$

b. $309.125 = 300 + 9 + \frac{1}{10} + \frac{2}{100} + \frac{5}{1000}$

c. $766.208 = 700 + 60 + 6 + \frac{2}{10} + \frac{8}{100}$

d. $9.001 = 9 + \frac{1}{1000}$

e. $0.256 = \frac{2}{10} + \frac{5}{100} + \frac{6}{1000}$

4. Match the following :

Ans.

a.	2.3 and 18.6	i.	$1 + \frac{7}{10} + \frac{5}{100}$
b.	9.37 and 5.043	ii.	6.38
c.	0.7 and 0.7000	iii.	Like decimals
d.	6.18 + 0.20	iv.	Equivalent
e.	13.12 2.003	v.	Unlike decimals
f.	Expanded form of 1.75	vi.	11.117

Unit Ten : Geometry

Exercise 10.1

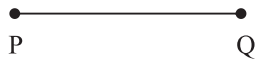
1. Classify the following as line, line–segment and ray :

Ans. a. 

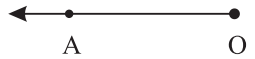
line-segment

b. 

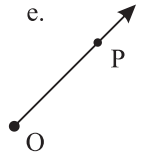
line

c. 

line-segment

d. 

Ray

e. 

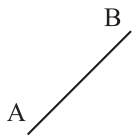
Ray

2. Match the following :

Ans.

Column A		**Column B**
a. A line has		i. definite length
b. A ray has		ii. of a line
c. A line cannot		iii. a ray
d. A line segment is a part		iv. be drawn on a paper
e. A line segment has		v. no definite length
f. $\overrightarrow{OP}$ represents		vi. only one end point

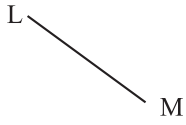
3. Measure the following line segments and fill in the blanks :

Ans. a. 

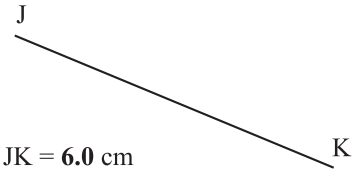
AB = **2.5** cm

b. 

PQ = **4.4** cm

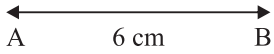
c. 

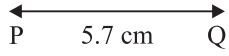
LM = **2.5** cm

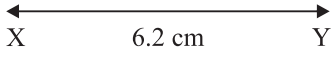
d. 

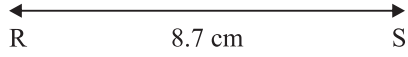
JK = **6.0** cm

4. Draw the line segments of the following lengths, using a ruler :

Ans. a. 

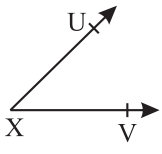
b. 

c. 

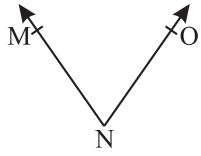
d. 

Exercise 10.2

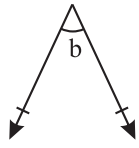
1. Name the angles :

Ans. a. 

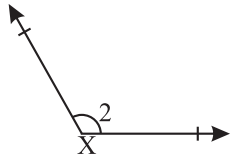
∠ UXV

b. 

∠ MNO

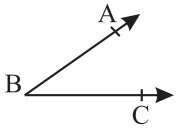
c. 

∠ b

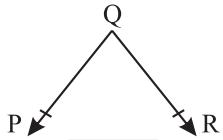
d. 

∠ 2

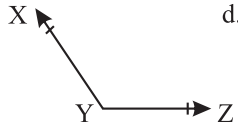
2. Label the points and name the angles :

Ans. a. 

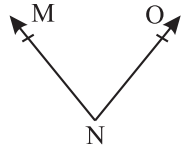
∠ ABC

b. 

∠ PQR

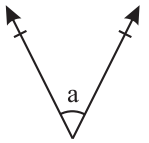
c. 

∠ XYZ

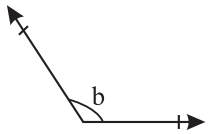
d. 

∠ MNO

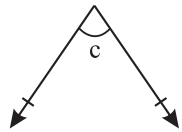
3. Label the angles and name them, using only one letter :

Ans. a. 

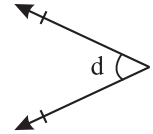
∠ a

b. 

∠ b

c. 

∠ c

d. 

∠ d

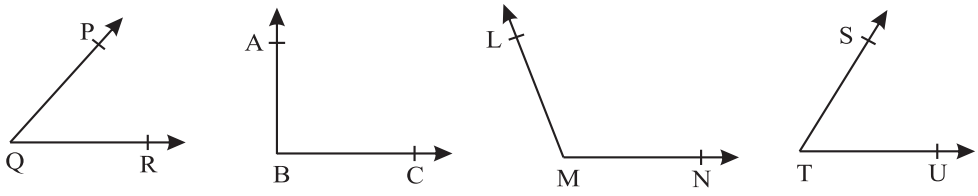
4. In the figure name the following angles using three letters :

Ans. ∠ 1 : ∠ **ABC** ∠ 2 : ∠ **DOC** ∠ 3 : ∠ **EOF**
∠ a : ∠ **BOC** ∠ b : ∠ **DOE** ∠ c : ∠ **AOF**

5. In the figure, name the points that lie :

Ans. a. G and F are interior of ∠ ABC. b. L and K are exterior of ∠ ABC.
c. A, J, B and C are on the ∠ ABC.

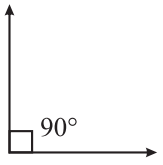
6. Measure the following angles :

Ans. 

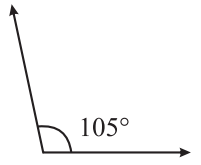
∠ PQR = 50º ∠ ABC = 90º ∠ LMN = 110º ∠ STU = 60º

Exercise 10.3

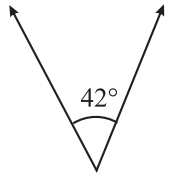
1. Classify the following angles as acute, right, obtuse, straight, reflex and complete angles :

Ans. a. 

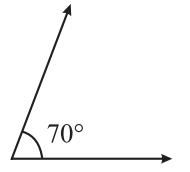
Right angle

b. 

Obtuse angle

c. 

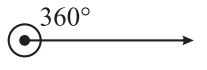
Acute angle

d. 

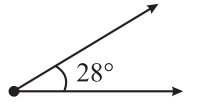
Acute angle

e. 

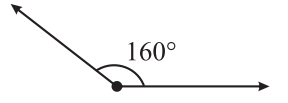
Straight angle

f. 

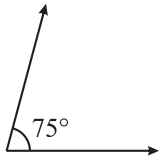
Complete angle

g. 

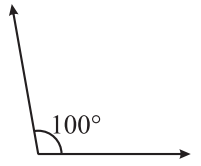
Acute angle

h. 

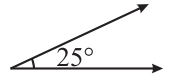
Obtuse angle

i. 

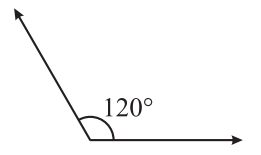
Acute angle

j. 

Obtuse angle

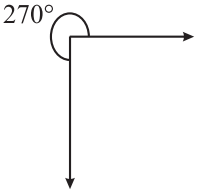
k. 

Acute angle

l. 

Obtuse angle

m. 270°



Reflex angle

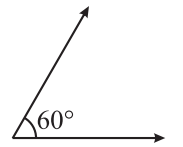
n. 190°

Reflex angle

o. 200°

Reflex angle

p. 60°



Acute angle

Exercise 10.4

1. Which of the following are polygons?

Ans. a.

b.

✓

c.

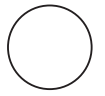
d.

✓

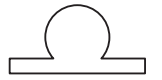
e.

✓

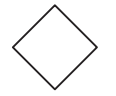
f.



g.



h.



✓

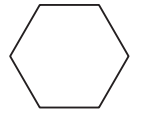
\

i.

✓

j.

k.



✓

l.

2. Write true (T) or false (F) : Also, correct the false statements :

Ans.

a. A polygon with 4 sides is called a pentagon. **False**

A polygon with 4 sides is called a square.

b. Every square is a rectangle. **True**

c. The adjacent sides of a quadrilateral have a common vertex. **True**

d. The diagonals of a square are unequal. **False**

The diagonals of a square are equal.

e. A triangle is a polygon. **True**

f. All quadrilaterals are rectangles. **False**

All rectangles are quadrilaterals.

g. A hexagon has 6 sides. **True**

3. Draw a quadrilateral PQRS.

Ans.

a. PQ, QR, RS and SP are sides of quadrilateral PQRS.

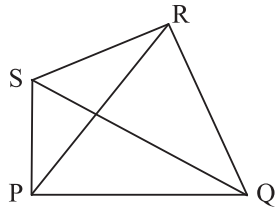
b. P, Q, R and S are vertices of quadrilateral PQRS.

c. PR, QS are diagonals of quadrilateral PQRS.

d. PQ, RS and PS, QR are two pairs of opposite sides.

e. PQ, QR; QR, RS; RS, SP : SP, PQ are four pairs of adjacent sides.

f. $\angle$ P, $\angle$ Q, $\angle$ R and $\angle$ S are four angles.



4. Look around in your classroom and at home.
Draw 5 things which are shaped like the following polygons :

Ans. Do it yourself.

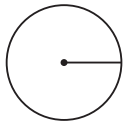
Exercise 10.5

1. Observe the given figure and name the following :

Ans. a. 0 is a centre of the circle.
b. OA, OC and OB are radii of the circle.
c. CB, AB and CA are diametre of the circle.
d.

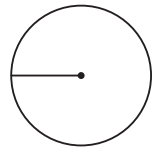
2. Measure the radius of the following circles :

Ans. a. b. c.



1 cm

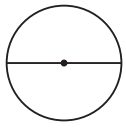
0.7 cm



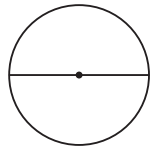
1.3 cm

3. Draw a diameter in each circle and measure it.

Ans. a. b. c.



2.1 cm



2.5 cm

0.7 cm

4. Write 'True' or 'False' for the following statements :

Ans. a. True b. False c. True d. True

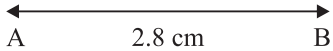
Let's Review

1. Tick (✓) the correct choice :

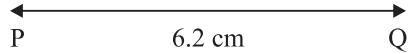
Ans. a. iii. b. ii. c. iii. d. ii.

2. Draw the line segments of the following lengths :

Ans. a.



b.



3. From the given figures list the points which are :

Ans. a. P and Z are exterior point of ∠ ABC.
b. X and Y are exterior point of ∠ ABC.

Unit Eleven : Money and Bills

Mental Maths

Observe a ₹ 500 note and answer the questions given below :

Ans. a. ₹ 500 is the value of this note.

b. 5 Notes of  or 10 Notes of ₹  are the two ways.

c. It is called lion capital.

d. Mahatma Gandhi.

e. Mahatma Gandhi

Exercise 11.1

1. Change to paise :

Ans. Since ₹ 1 = 100 paise

So,

a.	₹ 18.50	=	18.50 × 100 P	=	1850 P
b.	₹ 15.45	=	15.45 × 100 P	=	1515 P
c.	₹ 56.45	=	56.45 × 100 P	=	5645 P
d.	₹ 92.10	=	92.10 × 100 P	=	9120 P
e.	₹ 205.15	=	205.15 × 100 P	=	201515 P
f.	₹ 119.10	=	119.10 × 100 P	=	11910 P
g.	₹ 98.80	=	98.80 × 100 P	=	9880 P
h.	₹ 632.25	=	632.25 × 100 P	=	63225 P

2. Change to rupees :

Ans. Since 1 P = ₹ 1/100

So,

a.	335 P	=	₹ (335 ÷ 100)	=	₹ 3.35
b.	725 P	=	₹ (725 ÷ 100)	=	₹ 7.25
c.	1645 P	=	₹ (1645 ÷ 100)	=	₹ 16.45
d.	2365 P	=	₹ (2365 ÷ 100)	=	₹ 23.65
e.	5410 P	=	₹ (5410 ÷ 100)	=	₹ 54.10
f.	9115 P	=	₹ (9115 ÷ 100)	=	₹ 91.15
g.	45720 P	=	₹ (45720 ÷ 100)	=	₹ 457.20
h.	60510 P	=	₹ (60510 ÷ 100)	=	₹ 605.10

Exercise 11.2

1. Add the following :

Ans. a.

	₹ 27.51
+	₹ 52.69
	₹ 80.20

b.

	₹ 541.79
+	₹ 291.82
	₹ 833.61

c.

	₹ 981.11
+	₹ 121.29
	₹ 1102.40

d.

	₹ 237.91
+	₹ 130.21
	₹ 368.12

e.

	₹ 813.50
	₹ 80.50
+	₹ 76.25
	₹ 970.25

f.

	₹ 967.00
	₹ 314.50
+	₹ 75.50
	₹ 1357.00

g.

	₹ 205.45
	₹ 145.30
+	₹ 220.70
	₹ 571.45

h.

	₹ 310.45
	₹ 240.00
+	₹ 98.95
	₹ 649.40

2. Add the following :

Ans. a. ₹ 65.75 + ₹ 43.10

	₹ 65.75
+	₹ 43.10
	₹ 108.85

Ans. ₹ 108.85

b. ₹ 672.10 + ₹ 30.89

	₹ 672.10
+	₹ 30.89
	₹ 702.99

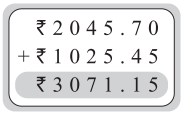
Ans. ₹ 702.99

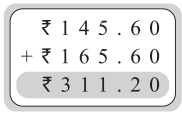
c. ₹ 215.45 + ₹ 46.30

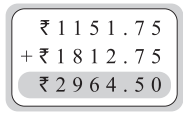
	₹ 215.45
+	₹ 46.30
	₹ 261.75

Ans. ₹ 261.75

d. ₹ 2045.70 + ₹ 1025.45 e. ₹ 145.60 + ₹ 165.60 f. ₹ 1151.75 + ₹ 1812.75



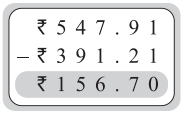




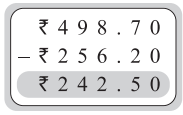
Ans. ₹ 3071.15 **Ans.** ₹ 311.20 **Ans.** ₹ 2964.50

3. Subtract the following :

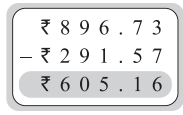
Ans. a.



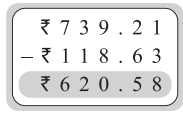
b.



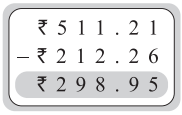
c.



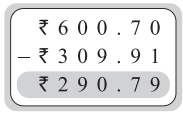
d.



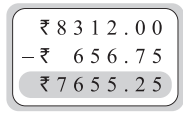
e.



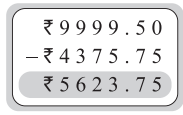
f.



g.

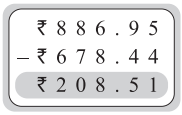


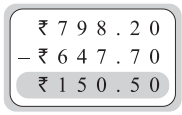
h.

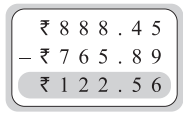


4. Subtract the following :

Ans. a. ₹ 886.95 – ₹ 678.44 b. ₹ 798.20 – ₹ 647.70 c. ₹ 888.45 – ₹ 765.89

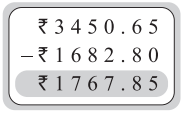


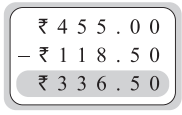


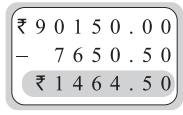


Ans. ₹ 208.51 **Ans.** ₹ 150.50 **Ans.** ₹ 122.56

d. ₹ 3450.65 – ₹ 1682.80 e. ₹ 455 – ₹ 118.50 f. ₹ 9015.00 – ₹ 765.89





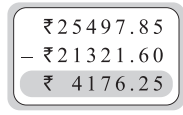


Ans. ₹ 1767.85 **Ans.** ₹ 336.50 **Ans.** ₹ 1464.50

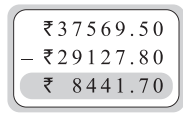
Exercise 11.3

1. Cost of a toy = ₹ 300
   Cost of a book = ₹ 127
   So, the total cost of both items = ₹ 300 + ₹ 127 = ₹ 427
   Hence, the total cost of both items is ₹ 427.

2. Cost of a scooter = ₹ 25497.85
   A man has paid an installment = ₹ 21321.60
   Money left = ₹ 25497.85 – ₹ 21321.60
   = ₹ 4176.25
   Hence, ₹ 4176.25 is left to pay.



3. Monthly income of Abhinav = ₹ 37569.50
   His expenditure = ₹ 37569.50 – ₹ 29127.80
   = ₹ 8441.70.
   His monthly saving ₹ 8441.70.



4. Cost of a car = ₹ 345297.70
Cost of a horse = ₹ 270521.30
Total amount = ₹ 345297.70 + ₹ 270521.30 = ₹ 615819.00
Hence, ₹ 615819 is the total cost of both items.

₹345297.70
+ ₹270521.30
₹615819.00

Exercise 11.4

1. Multiply the following :

Ans. a.
₹ 73
× 3
₹219

b.
₹ 63.20
× 4
₹252.80

c.
₹ 211.30
× 3
₹633.90

d.
₹ 56
× 7
₹392

e.
₹350.15
× 6
₹2100.90

f.
₹ 87.10
× 9
₹783.90

g.
₹ 759.50
× 12
151900
75950×
₹9114.00

h.
₹ 432.50
× 32
86500
129750×
₹13840.00

i.
₹1023.90
× 52
204780
511950×
₹53242.80

2. Divide the following :

Ans. a.

```
  629
4)2516
 -24
  11
  -8
  36
 -36
   0
```

Ans. ₹ 2516 ÷ 4
= ₹ 629

b.

```
  105.10
5)525.50
 -5
  25
 -25
   5
  -5
   00
  -00
    0
```

Ans. ₹ 525.50 ÷ 5
= ₹ 105.10

c.

```
  42.60
2)85.20
 -8
  5
 -4
  12
 -12
   00
  -00
    0
```

Ans. ₹ 85.20 ÷ 2
= ₹ 42.60

d.

```
  106
4)424
 -4
  24
 -24
   0
```

Ans. ₹ 424 ÷ 4
= ₹ 106

e.

```
  24.05
4)96.20
 -8
  16
 -16
   20
  -20
    0
```

Ans. ₹ 96.20 ÷ 4
= ₹ 24.05

f.

```
  155.10
3)465.30
 -3
  16
 -15
   15
  -15
    3
   -3
    00
    00
     0
```

Ans. ₹ 465.30 ÷ 3
= ₹ 155.10

g.

```
   533
11)5863.00
 - 55
  36
 - 33
  33
 - 33
   00
 - 00
    0
```

Ans. ₹ 5863.00 ÷ 11
= ₹ 533

h.

```
  258.30
15)3874.50
 - 30
  87
 - 75
  124
 - 120
   45
 - 45
    0
 - 0
    0
```

Ans. ₹ 3874.50 ÷ 15
= ₹ 258.30

i.

```
  583.50
19)11086.50
 - 95
  158
 - 152
   66
 - 57
   95
 - 95
    00
 - 00
    0
```

Ans. ₹ 11086.50 ÷ 19
= ₹ 583.50

Exercise 11.5

Ans. 1. Cost of a book = ₹ 108.50
So, cost of 8 books = ₹ 108.50 × 8
= ₹ 868
Hence, she spent ₹ 868 in all.

```
₹ 1 0 8 . 5 0
          × 8
₹ 8 6 8 . 0 0
```

```
  232
8)1856
 - 16
  25
 - 24
  16
 - 16
   0
```

2. Cost of one pen = ₹ 8
So, number of pens = ₹ 1856 ÷ ₹ 8
= ₹ 232
Hence, 232 pens can be bought for ₹ 1856.

3. Cost of 4 jackets = ₹ 2512
So, cost of 1 jacket = ₹ (2512 ÷ 4)
= ₹ 628
Hence, ₹ 628 is the cost of one jacket

```
  628
4)2512
 - 24
  11
 - 8
  32
 - 32
   0
```

4. Cost of one chocolate = ₹ 5.25
So, cost of 25 chocolate = ₹ 25 × 5.25
= ₹ 131.25
Hence, ₹ 131.25 is the cost of 25 chocolate.

```
    ₹ 5 . 2 5
          × 2 5
      2 6 2 5
    1 0 5 0 ×
₹ 1 3 1 . 2 5
```

5. Cost of 1 pair of shoes = ₹ 1125.50
So, cost of 6 pairs = ₹ 1125.50 × 6
= ₹ 6753
Hence, ₹ 6753 is the cost of 6 such pairs of shoes.

```
₹ 1 1 2 5 . 5 0
          × 6
    ₹ 6 7 5 3
```

6. Sonali bought 8 tickets for = ₹ 506.72
So, the cost of one ticket = ₹ 506.72 ÷ 8
= ₹ 63.34

```
  63.34
8)506.72
 - 48
  26
 - 24
  27
 - 24
  32
 - 32
   0
```

Exercise 11.6

1. Read the given bill and answer the following questions :

Ans.

Items	Quantity	Unit Price	Total Price
Pastry	3	₹ 28	₹ 224
Burger	8	₹ 35	₹ 280
Gift	6	₹ 112	₹ 672
Cold Drink	10	₹ 12	₹ 120
Candy	5 (per packet)	₹ 50	₹ 250
Ice-cream	200	₹ 15	₹ 3000
		Grand Total	**₹ 4546**

a. The grand total = ₹ 4546

b. Cost of a Pastry = ₹ 28 Cost of a Burger = ₹ 35

Cost of a Gift = ₹ 112 Cost of a Cold drink = ₹ 12

Cost of a candy's packet = ₹ 50 Cost of a Ice-cream = ₹ 15

2. Make bills for the following purchases in your notebooks :

Ans. a.

Grocery Store				
S. No.	**Items bought**	**Quantity**	**Unit Price**	**Total Price**
1.	Rice	6 kg	₹ 24	₹ 144
2.	Oil	2 L	₹ 134	₹ 268
3.	Dal	1 kg	₹ 42	₹ 42
			Grand Total	**₹ 454**

b.

Town side Cafe				
S. No.	**Items bought**	**Quantity**	**Unit Price**	**Total Price**
1.	Pizzas	6	₹ 89	₹ 534
2.	Cold drink	6	₹ 12	₹ 72
3.	Pastries	5	₹ 24	₹ 120
4.	French Fries	3 (per packet)	₹ 43	₹ 129
5.	Burgers	4	₹ 28	₹ 112
			Grand Total	**₹ 967**

3. Sanjeet went to a cloth shop to buy dress materials for his family for Diwali. He bought 4 m of cloth for trousers at ₹215 per metre, 5.2 m of shirt material at ₹310 per metre, a silk saree, for his wife for ₹7150 and 2 synthetic sarees. How much was the total bill amount?

Ans.

Cloth Shop				
S. No.	**Types of cloth**	**Quantity**	**Unit Price**	**Total Price**
1.	Trousers	4 m	₹ 215	₹ 860
2.	Shirt material	5.2 m	₹ 310	₹ 1612
3.	Silk saree	1	₹ 7150	₹ 7150
			Grand Total	**₹ 9622**

Let's Review

1. Tick (✓) the correct choice :

Ans. a. i. b. iii c. iii d. ii

2. Solve the following :

Ans. a.

	₹ 4510.50
+	₹ 4150.50
	₹ 8661.00

b.

	₹ 108.75
+	₹ 75.95
	₹ 184.70

c.

	₹ 312.60
–	₹ 145.78
	₹ 166.82

d.

	₹ 7546.50
–	₹ 1429.50
	₹ 6117.00

e.

	₹ 595.50
×	5
	₹ 2977.50

f.

	₹ 865.35
×	35
	₹ 30287.25

g.

```
      226.82
25 ) 5670.50
   – 50
   ------
      67
   – 50
   ------
     170
   – 150
   ------
      205
   – 200
   ------
       50
   – 50
   ------
        0
   ------
```

Thus, ₹ 5670.50 ÷ 25 = ₹ 226.82

h.

```
      1108.50
9 ) 9976.50
   – 9
   ---
     9
   – 9
   ---
     76
   – 72
   ----
      45
   – 45
   ----
       00
   – 00
   ----
        x
   ----
```

Thus, ₹ 9976.50 ÷ 9 = ₹ 1108.50

3. Divya goes to a garment shop. Some of the items available there are given in the price list.

Ans.

Fashion Point				
S. No.	**Types of cloth**	**Quantity**	**Unit Price**	**Total Price**
1.	Salwar Suit	2	₹ 450	₹ 900
2.	Jeans	1	₹ 875	₹ 875
3.	Jacket	1	₹ 595	₹ 595
4.	Pair of Sandals	4	₹ 522	₹ 2088
			Grand Total	**₹ 4458**

Unit Twelve : Time

Exercise 12.1

1. Write the time shown in the clocks. One is done for you :

Ans. a.

3 : 18

Eighteen minutes part 3.

b.

8 : 34

Twenty-six minutes to 9

c.

1 : 25

Twenty-five minutes past 1

d. 

3 : 35

Twenty-five minutes to 4

e. 

4 : 48

Thirteen minutes to 5

f. 

8 : 34

Twenty-six minutes to 9

g. 

10 : 27

Twenty-seven minutes part 10

h. 

2 : 38

Twenty-two minutes to 3

i. 

5 : 58

Two minutes to 6

2. Draw the minute and the hour hand to show the given time :

Ans. a. 

3 : 18

b. 

Seven twenty-seven

c. 

17 minutes past 1

d. 

43 minutes past 9

e. 

7 : 58

f. 

12 : 49

Exercise 12.2

1. Convert to 24-hour clock time :

Ans.

a.	3:00 a.m. + 00:00 hrs	=	0300 hrs	b.	05:15 am + 00:00 hrs	=	0515 hrs
c.	12:15 p.m. + 12.00 hrs	=	2415 hrs	d.	03:45 pm + 12:00 hrs	=	1545 hrs
e.	10:42 am + 00:00 hrs	=	1042 hrs	f.	05:07 pm + 00:00 hrs	=	0507 hrs
g.	0.8:16 p.m + 12:00 hrs	=	1816 hrs	h.	09:32 p.m. + 12:00 hrs	=	2132 hrs
i.	10:56 pm + 12:00 hrs	=	2256 hrs	j.	11:12 am + 00:00 hrs	=	1112 hrs
k.	07:25 p.m. + 12:00 hrs	=	1925 hrs	l.	10:47 am + 00:00 hrs	=	1047 hrs
m.	6:00 am + 00:00 hrs	=	0600 hrs	n.	8:42 pm + 12:00 hrs	=	2042 hrs
o.	10:10 am + 00:00 hrs	=	1010 hrs.				

2. Convert to 12-hour clock time :

Ans.

a.	**05:30 hours**	=	05:30 am + 00:00 hrs	=	05:30 am
b.	**00:25 hours**	=	12:25 am + 00:00 hrs	=	12:25 pm
c.	**11:58 hrs**	=	11:58 am + 00:00 hrs	=	11:58 am
d.	**12:42 hours**	=	12:42 pm + 00:00 hrs	=	12:42 pm

e. **10:41 hours** = 10:41 am + 00:00 hrs = 10:41 am
f. **14:22 hours** = 2:22 pm + 12:00 hrs = 2:22 pm
g. **16:28 hours** = 4:28 pm + 12:00 hrs = 4:28 pm
h. **20:47 hours** = 08:47 pm + 12:00 hrs = 08:47 pm
i. **23:05 hours** = 11:05 pm + 12:00 hrs = 11:05 pm
j. **17:00 hours** = 05:00 pm + 12:00 hrs = 05:00 pm
k. **21:59 hours** = 09:59 pm + 12:00 hrs = 09:59 pm
l. **18:38 hours** = 06:38 pm + 12:00 hrs = 06:38 pm
m. **09:55 hours** = 09:55 am + 00:00 hrs = 09:55 am
n. **15:44 hours** = 03:44 pm + 12:00 hrs = 03:44 pm
o. **23:15 hours** = 11:15 pm + 12:00 hrs = 11:15 pm

Exercise 12.3

1. Convert into minutes :

Ans. Since 1 hours = 60 min

So,

a. **5 hours**
= 5 × 60 min
= 300 min

b. **8 hours**
= 8 × 60 min
= 480 min.

c. **24 hours**
= 24 × 60 min
= 1440 min

d. **6 hours 25 min**
= 6 × 60 min + 25 min
= 360 min + 25 min = 385 min

e. **10 hours 30 min**
= 10 × 60 min + 30 min
= 600 min + 30 min
= 630 min

f. **12 hours 25 min**
= 12 × 60 min + 25 min
= 720 min + 25 min
= 745 min

g. **2 hours**
= 2 × 60 min
= 120 min

h. **5 hours 30 min**
= 50 × 60 min + 30 min
= 300 min + 30 min = 330 min

2. Convert into seconds :

Ans. Since, 1 min = 60 sec.

So,

a. **5 min**
= 5 × 60 sec.
= 300 sec.

b. **60 min**
= 60 × 60 sec.
= 3600 sec.

c. **15 min.**
= 15 × 60 sec.
= 900 sec.

d. **1 hour 15 min.**
= 1 × 60 min + 15 min
= 60 min + 15 min = 75 min
= 75 × 60 sec. = 4500 sec.

e. **3 hours 30 min**
= 3 × 60 min + 30 min
= 1800 min + 30 min
= 1830 min
= 1830 × 60 sec.
= 109800 sec.

f. **1 hour 30 sec.**
= 1 × 60 min + 30 sec.
= 60 min + 30 sec.
= 60 × 60 sec. + 30 sec.
= 3600 sec. + 30 sec.
= 3630 sec.

g. **2 hours 20 sec.**
= 2 × 60 min + 20 sec.
= 120 min + 20 sec.
= 120 × 60 sec. + 20 sec.
= 7200 sec. + 20 sec.
= 7220 sec.

h. **1 hour 1 min 1 sec.**
= 1 × 60 min + 1 min + 1 sec.
= 60 min + 1 min + 1 sec.
= 61 min + 1 sec.
= 61 × 60 sec. + 1 sec.
= 3660 sec. + 1 sec. = 3661 sec.

3. Convert into hours and minutes :

Ans. Since, 1 min = $\frac{1}{60}$ hours

So,

a. **65 min**

= (65 ÷ 60) h

= 65 ÷ 60 gives quotient 1 h and remainder, 5 min

∴ 65 min = 1 hours and 5 min

$$\begin{array}{r} 1 \\ 60\overline{)\,65} \\ -\,60 \\ \hline 5 \end{array}$$

b. **200 minutes**

= (200 ÷ 60) h

= 200 ÷ 60 gives quotient 3 h and remainder 20 min

∴ 200 min = 3 hours and 20 min.

$$\begin{array}{r} 2 \\ 60\overline{)\,200} \\ -\,180 \\ \hline 20 \end{array}$$

c. **600 minutes**

= (600 ÷ 60) h

= 600 ÷ 60 gives quotient 10 h

∴ 600 min = 10 h

$$\begin{array}{r} 10 \\ 60\overline{)\,600} \\ -\,60 \\ \hline 0 \\ -\,0 \\ \hline 0 \end{array}$$

d. **6600 min**

= (6600 ÷ 60) h

= 6600 ÷ 60 gives quotient 110 h

∴ 6600 min = 110 h

$$\begin{array}{r} 110 \\ 60\overline{)\,6600} \\ -\,60 \\ \hline 60 \\ -\,60 \\ \hline 0 \\ -\,0 \\ \hline 0 \end{array}$$

e. **7825 min**

= (7825 ÷ 60) h

= 7825 ÷ 60 gives quotient 130 h and remainder 25 min

∴ 7825 min = 130 h 25 min

$$\begin{array}{r} 130 \\ 60\overline{)\,7825} \\ -\,60 \\ \hline 182 \\ -\,180 \\ \hline 25 \\ -\,00 \\ \hline 25 \end{array}$$

f. **9009 min.**

= (9009 ÷ 60) min

= 9009 ÷ 60 gives quotient 140 h and remainder 9 min.

∴ 9009 min = 150 h and 9 min

$$\begin{array}{r} 150 \\ 60\overline{)\,9009} \\ -\,60 \\ \hline 300 \\ -\,300 \\ \hline 9 \\ -\,0 \\ \hline 9 \end{array}$$

4. Convert into minutes and seconds :

Ans. a. **480 sec.**

= (480 ÷ 60) min

= 480 ÷ 60 gives quotient 8 min

∴ 480 min = 8 min

$$\begin{array}{r} 8 \\ 60\overline{)\,480} \\ -\,480 \\ \hline 0 \end{array}$$

b. **600 sec.**

= (600 ÷ 60) min

= 600 ÷ 60 gives quotient 10 min

∴ 600 sec. = 10 min

$$\begin{array}{r} 10 \\ 60\overline{)\,600} \\ -\,60 \\ \hline 0 \\ -\,0 \\ \hline 0 \end{array}$$

c. **3600 sec.**

= (3600 ÷ 60) min

= 3600 ÷ 60 gives quotient 60 min

∴ 3600 sec. = 60 min.

$$\begin{array}{r} 60 \\ 60\overline{)\,3600} \\ -\,360 \\ \hline 0 \\ -\,0 \\ \hline 0 \end{array}$$

d. **500 sec.**
= (500 ÷ 60) min
= 500 ÷ 60 gives quotient 8 min and 20 sec.
∴ 500 sec. = 8 min 20 sec.

```
    8
60 ) 500
   -480
    20
```

e. **820 sec.**
= (820 ÷ 60) min
= 820 ÷ 60 gives quotient 13 min and 40 sec.
∴ 820 sec. = 13 min. 40 sec.

```
    13
60 ) 820
   - 60
    220
   -180
     40
```

f. **1550 sec.**
= (1550 ÷ 60) min.
= 1550 ÷ 60 gives quotient 25 min and 50 sec.
∴ 1550 sec. = 25 min. 50 sec.

```
    25
60 ) 1550
   - 120
    350
   - 300
     50
```

Exercise 12.4

1. Add the following :

Ans. a.

	hrs	min
		1
	8	3 8
+	1	1 2
	9	5 0

Ans. 9 h 50 min

b.

	hrs	min
		1
	4	5 5
+	3	3 9
	1	
	7	9 4
	8	3 4

is more than 60 minutes.

Ans. 8 h 34 min

c.

	hrs	min
	6	3 0
+	8	5 0
	1	
	1 4	8 0
	1 5	3 0

is more than 60 minutes.

Ans. 15 h 30 min

d.

	hrs	min
	6	5 1
+	2	3 8
	1	
	8	8 9
	9	2 9

is more than 60 minutes.

Ans. 9 h 29 min

2. Subtract the following :

Ans. a.

	hrs	min
	8	3 7
–	2	1 2
	6	2 5

Ans. 6 h 25 min

b.

	hrs	min
		96
	5	3 6
–	3	4 8
	1	4 8

Ans. 1 h 48 min

c.

	hrs	min
	8	4 7
–	3	1 8
	5	2 9

Ans. 5 h 29 min

d.

	hrs	min
	1 9	75
	2 0	1 5
–	1 8	2 7
	1	4 8

Ans. 1 h 48 min

3. Add and subtract the following :

Ans. a.

	hrs	min	sec
	2	31	12
+	3	12	31
	5	43	43

Ans. 5 h 43 min 43 sec.

b.

	hrs	min	sec
	4	59	36
+	3	27	47
	1	1	
	7	86	83
	8	27	23

Ans. 8 h 27 min 23 sec.

c.

	hrs	min	sec
	6	37	18
+	8	32	29
	1		
	14	69	47
	15	9	47

Ans. 15 h 9 min 47 sec.

d.

	hrs	min	sec
	6	21	51
+	5	43	29
	1	1	
	11	64	80
	12	5	20

Ans. 12 h 5 min 20 sec.

e.

	hrs	min	sec
	12	30	59
+	8	16	12
	1	1	
	20	46	71
	21	7	11

Ans. 21 h 7 min 11 sec.

f.

	hrs	min	sec
	20	30	48
–	16	12	24
	4	18	24

Ans. 4 h 18 min 24 sec.

g.

	hrs	min	sec
	11	89	75
	~~12~~	~~29~~	~~15~~
–	1	40	27
	10	49	48

Ans. 10 h 49 min 60 sec.

h.

	hrs	min	sec
	15	84	
	16	24	39
–	12	44	28
	3	40	11

Ans. 3 h 40 min 11 sec.

i.

	hrs	min	sec
	06	06	20
–	02	05	10
	04	01	10

Ans. 4 h 1 min 10 sec.

Exercise 12.5

1. Write the duration of time from :

Ans. a.

		hrs	min
Finishing time	=	7	30
Starting time	=	– 5	30
Duration	=	2	00

b.

		hrs	min
Finishing time	=	8	45
Starting time	=	– 6	00
Duration	=	2	45

c.

		hrs	min
Finishing time	=	9	30
Starting time	=	– 8	15
Duration	=	1	15

d.

		hrs	min
Finishing time	=	13	30
Starting time	=	– 11	10
Duration	=	2	20

e.

		hrs	min
Finishing time	=	8	50
Starting time	=	– 6	20
Duration	=	2	30

f.

		hrs	min
Finishing time	=	13	30
Starting time	=	– 10	30
Duration	=	3	00

g.

		hrs	min
Finishing time	=	21	00
Starting time	=	– 9	00
Duration	=	12	00

h.

		hrs	min
Finishing time	=	11	30
Starting time	=	– 6	30
Duration	=	5	00

2. Solve the following :

Ans. a. As we know, train star at 16:30

Starting time = 16:30 = 16 h 30 min
Duration = 28 hours
Finishing time = 16 h 30 min + 28 h = 44 h 30 min
So, reach time at Delhi = 44 h 30 min – 24 h = 20 h 30 min
Hence, the train reached 20:30 hours on Monday

b. Starting time = 5:00 am = 5 h
Duration = 1h + 45 min + 1 hr 10 min
= (1 + 1) h + (45 + 10) min = 2h + 55 min
Finishing time = 5 h + 2 h + 55 min = 7 h + 55 min
= 7:55 am
Hence, he leaved 7:55 am for school.

c. Starting time = 7:00 am = 7 h
Duration = 11 h + 15 min
Finishing time = 7 h + 11 h + 15 min = 18 h + 15 min
or = 06:15 pm
Hence, she reached 6:15 p.m. in evening on Monday.

d. Starting time = 7:30 am = 7h 30 min.
Duration = 1h + 8 h + 30 min = 9 h + 30 min
Finishing time = 7 h + 30 min + 9 h + 30 min
= 16 h + 60 min = 17 h
= 17:00 hours
or = 5:00 pm
Hence, he leaved 5:00 pm the office.

e. Starting time = 8:30 am = 8 h 30 min
Finishing time = 5:00 pm = (12 + 5) hours = 17 hours
Duration = Finishing time = (17:00 – 8:30) hours
= 8:30 hours
or = 8 h 30 min.
Hence, the watch was not functioning from 8 h 30 min.

Exercise 12.6

1. Circle the leap years :

Ans. a. **(1948)** b. **(1600)** c. 2009 d. **(1800)** e. **(2024)**
f. **(1956)** g. 2386 h. **(1976)** i. 2010 j. **(3200)**

2. Write the dates in short form :

Ans. a. 14 August 2015 = 14.08.15
b. 18 November 2002 = 18.11.02
c. 17 October 2016 = 17.10.16
d. 31 July 2013 = 31.07.13

Mental Maths

Fill in the blanks :

Ans. a. There are **366** days in a leap year.
b. There are 29 days in the month of **February** in a leap year.
c. Leap year comes after every **4** years.
d. February month has **28** days in a year which is not a leap year.

Let's Review

1. Read the face of the clock and write the time into different ways :

Ans. a. 

4 : 45

15 minutes to 5

b. 

11 : 22

22 minutes past 11

c. 

6 : 27

27 minutes past 6

d. 

4 : 53

8 minutes to 5

2. Complete the given table :

Ans.

Time in words	24-hours clock	12-hour clock
Six fifteen in the evening	**18:15 hours**	**6:15 p.m.**
Two twenty at noon	14:20 hours	**2:20 p.m.**
Nine forty-five in night	**21:45 hours**	9:45 p.m.
half past 4 in time morning	**04:30 hours**	**4:30 a.m.**
20 minutes to 6 in the morning	05:40 hours	**5:40 a.m.**
15 minutes past 6 in the morning	**06:15 hours**	6:15 a.m.

3. Add or subtract :

Ans. a.

hrs	min
2	2 0
+ 8	4 0
1	
1 0	6 0
1 1	0 0

Ans. 11 h : 00 min

b.

hrs	min
4	65
5	0 5
– 3	1 5
1	5 0

Ans. 1 hours 50 min

c.

hrs	min
1 0	2 5
+ 0 7	4 0
1	
1 7	6 5
1 8	0 5

Ans. 18 h 05 min

d.

hrs	min
2 0	10 0
2 1	4 0
– 1 3	5 5
0 7	4 5

Ans. 7 h 45 min

4. Solve the following :

Ans. a. Starting time = 10:33 am = 10 h 30 min
Duration = 3 hours
Finishing time = 10 h + 30 min + 3 h
= 13 h + 30 min
= 13:30 hours
or = 1:30 p.m.
Hence, Sakshi returned to home at 1:30 pm

b. Starting time = 9:00 am = 9 hours
Finishing time = 2:30 pm = (12:00 + 2:30) hours
= 14:30 hours
Duration = 14:30 hours – 9 hours
= 5:30 hrs
or = 5 h 30 min
Hence, she spent 5 h 30 min in school

Exercise 13.1

1. Look at the place-value chart and answer the following questions :

Ans.

a. 1 decametre = **1000** centimetres
b. 1 kilogram = **100** decagrams
c. 1 decilitre = **100** millilitres
d. 1 metre = **1000** millimetres
e. 1 hectometre = 100 **metres**
f. 1 decametre = 100 **decimetres**
g. 1 kilogram = **10** hectograms
h. 1 centilitre = **10** millilitres
i. 1 kilolitre = **1000** litres
j. 1 hectolitre = **10** decalitres
k. 1 **decimetre** = 100 millilitres
l. 1 **decalitre** = 100 decilitres
m. 1 hectometre = **1000** decimetres
n. 1 decimetre = **100** millimetres
o. 1 **litre** = 100 centilitres
p. 1 **hectolitre** = 10 decalitres

Exercise 13.2

1. Convert into centimetre.

Ans. Since 1 m = 100 cm. So,

a. **2m 16 cm** = 2m + 16 cm = 2 × 100 cm + 16 cm
= 200 cm + 16 cm = 216 cm

b. **1 m 91 cm** = 1 m + 91 cm = 1 × 100 cm + 91 cm
= 100 cm + 91 cm = 191 cm

c. **5m** = 5 × 100 cm = 500 cm

d. **4 m 22 cm** = 4 m + 22 cm = 4 × 100 cm + 22 cm
= 400 cm + 22 cm = 422 cm

2. Convert into metre and centimetre :

Ans. Since 1 cm = $\frac{1}{100}$ m. So,

a. **623 cm** = 600 cm + 23 cm = (600 ÷ 100) m + 23 cm
= 6 m + 23 cm = 6 m 23 cm

b. **801 cm** = 800 cm + 1 cm = (800 ÷ 100) m + 1 cm
= 8 m + 1 cm = 8 m 1 cm

c. **4219 cm** = 4200 cm + 19 cm = (4200 ÷ 100) cm + 19 cm
= 42 m + 19 cm = 42 m 19 cm

d. **3316 cm** = 3300 cm + 16 cm = (3300 ÷ 100) m + 16 cm
= 33 m + 16 cm = 33 m 16 cm

3. Convert into millimetre :

Ans. Since, 1 cm = 10 mm. So,

a. **6 cm 24 mm** = 6 cm + 24 mm = 6 × 10 mm + 24 mm
= 60 mm + 24 mm = 84 mm

b. **7 m 218 mm** = 7 m + 218 mm = 7 × 100 cm + 218 mm
= 700 cm + 218 mm = 700 × 10 mm + 218 mm
= 7000 mm + 218 mm = 7218 mm

c. **5 cm 31 mm** = 5 × 10 mm + 31 mm = 50 mm + 31 mm
= 81 mm

d. **3 m 522 mm** = 3 m + 522 mm = 3 × 100 cm + 522 mm
= 300 cm + 522 mm = 300 × 10 mm + 522 mm
= 3000 mm + 522 mm = 3522 mm

4. Convert into centimetre and millimetre :

Ans. Since, 1 mm = $\frac{1}{10}$ cm. So,

a. **66 mm** = (60+ 6) mm = (60 ÷ 10) cm + 6 mm
= 6 cm + 6 mm = 6 cm 6 cm

b. **23 mm** = 20 mm + 3 mm = (20 ÷ 10) cm + 3 mm
= 2 cm + 3 mm = 2 cm 3 mm

c. **161 mm** = 160 mm + 1 mm = (160 ÷ 10) cm + 1 mm
= 16 cm + 1 mm = 16 cm 1 mm

d. **464 mm** = 460 mm + 4 mm = (460 ÷ 10) cm + 4 mm
= 46 cm + 4 mm = 46 cm 4 mm

5. Convert into metre :

Ans. Since, 1 km = 1000 m. So,

a. **5 km 218 m** = 5 km + 218 m = 5 × 1000 m + 218 m
= 5000 m + 218 m = 5228 m

b. **6 km 323 m** = 6 × 1000 m + 323 m = 6000 m + 323 m
= 6323 m

c. **1 km 65 m** = 1 × 1000 m + 65 m = 1000 m + 65 m
= 1065 m

d. **2 km 212 m** = 2 × 1000 m + 212 m = 2000 m + 212 m
= 2212 m

6. Convert into kilometres and metre.

Ans. Since, 1 m = $\frac{1}{1000}$ km. So,

a. **2089 m** = 2000 m + 89 m = (2000 ÷ 1000) km + 89 m
= 2 km + 89 m = 2 km 89 m

b. **4365 m** = 4000 m + 365 m = (4000 ÷ 1000) km + 365 m
= 4 km + 365 m = 4 km 365 m

c. **7193 m** = 7000 m + 193 m = (7000 ÷ 1000) km + 193 m
= 7 km + 193 m = 7 km 193 m

d. **16215 m** = 16000 m + 215 m = (16000 ÷ 1000) km + 215 m
= 16 km + 215 m = 16 km 215 m

7. Convert into gram :

Ans. Since, 1 kg = 1000 g. So,

a. **4 kg 652 g** = 4 kg + 652 g = 4 × 1000 g + 652 g
= 4000 g + 652 g = 4652 g

b. **5 kg 30 g** = 5 kg + 30 g = 5 × 1000 g + 30 g
= 5000 g + 30 g = 5030 g

c. **2 kg 6 g** = 2 × 1000 g + 6 g = 2000 g + 6 g
= 2006 g

d. **13 kg 825 g** = 13 kg + 825 g = 13 × 1000 g + 825 g
= 13000 g + 825 g = 13825 g

8. Convert into kilogram and gram :

Ans. Since, 1 g = $\frac{1}{1000}$ kg. So,

a. **6821 g** = 6000 g + 821 g = (6000 ÷ 1000) kg + 821 g
= 6 kg + 821 g = 6 kg 821 g

b. **18211 g** = 18000g + 211 g = (18000 ÷ 1000) kg + 211 g
= 18 kg + 211 g = 18 kg 211 g

c. **41660 g** = 41000 g + 660 g = (41000 ÷ 1000) kg + 660 g
= 41 kg + 660 g = 41 kg 660 g

d. **63130 g** = 63000 g + 130 g = (63000 ÷ 1000) kg + 130 g
= 63 kg + 130 g = 63 kg 130 g

9. Convert into gram and milligram :

Ans. Since, 1 mg = $\frac{1}{1000}$ g. So,

a. **6128 mg** = 6000 mg + 128 mg = (6000 ÷ 1000) g + 128 mg
= 6 g + 128 mg

b. **2323 mg** = 2000 mg + 323 mg = (2000 ÷ 1000) g + 323 g
= 2 g + 323 g = 2 g 323 g

c. **1509 mg** = 1000 mg + 509 mg = (1000 ÷ 1000) g + 509 mg
= 1 g + 509 mg = 1 g 509 mg

d. **19111 mg** = 19000 mg + 111 mg = (19000 ÷ 1000) g + 111 mg
= 19 g + 111 mg = 19 g 111 mg

10. Convert into milligram :

Ans. Since, 1 g = 1000 mg. So,

a. **6 g 215 mg** = 6g + 215 mg = 6 × 1000 mg + 215 mg
= 6000 mg + 215 mg = 6215 mg

b. **5 g 143 mg** = 5 g + 143 mg = 5 × 1000 mg + 143 mg
= 5000 mg + 143 mg = = 5143 mg

c. **8g 103 mg** = 8g + 103 mg = 8 × 1000 mg + 103 mg
= 8000 mg + 103 mg = 8103 mg

d. **9 g 182 mg** = 9 g + 182 mg = 9 × 1000 mg + 182 mg
= 9000 mg + 182 mg = 9182 mg

11. Convert into millilitre :

Ans. Since, 1 L = 1000 mL. So,

a. **6 L 75 ml** = 6 L + 75 mL = 6 × 1000 mL + 75 mL
= 6000 mL + 75 mL = 6075 mL

b. **13 L 105 mL** = 13 L + 105 mL = 13 × 1000 mL + 105 mL
= 13000 mL + 105 mL = 13105 mL

c. **19 L 23 mL** = 19 L + 23 mL = 19 × 1000 mL + 23 mL
= 19000 mL + 23 mL = 19023 mL

d. **14 L 50 mL** = 14 L + 50 mL = 14 × 1000 mL + 50 mL
= 14000 mL + 50 mL = 14050 mL

12. Convert into litre and millilitre.

Ans. Since, 1 mL = $\frac{1}{1000}$ L. So,

a. **2133 mL** = 2000 mL + 133 mL = (2000 ÷ 1000) L + 133 mL
= 2 L + 133 mL
= 2 L 133 mL

b. **62150 mL** = 62000 mL + 150 mL
= (62000 ÷ 1000) L + 150 mL
= 62 L + 150 mL
= 62 L 150 mL

c. **88121 mL** = (88000 + 121) mL = 88000 mL + 121 mL
= (88000 ÷ 1000) L + 121 mL
= 88 L + 121 mL
= 88 L 121 mL

d. **83381 mL** = 83000 mL + 381 mL = (83000 ÷ 1000) L + 381 mL
= 83 L + 381 mL = 83 L 381 mL

Exercise 13.3

1. Add the following :

Ans. a.

	g	mg
	9	6 1 4
+	5	2 4 0
	1 4	8 5 4

b.

	l	m*l*
	6	1 4 1
+	9	9 3 5
	1 6	0 7 6

c.

	km	m
	8	8 6 9
	1	2 6 9
−	4	4 2 5
	1 4	5 6 3

d.

	g	mg
	1 9	4 1 5
+	5	8 7 5
	2 5	2 9 0

2. Subtract the following :

Ans. a.

	km	m
	8	1 5 7
−	2	9 8 3
	5	1 7 4

b.

	g	mg
	8	3 4 3
−	1	3 3 0
	7	0 1 3

c.

	l	m*l*
	6	0 8 4
−	4	1 6 1
	1	9 2 3

d.

	km	m
	8 1	3 9
−	4 2	3 6
	3 9	0 3

3. Add :

Ans. a.

	m	cm
	(1)	(1)
	1 5	2 5
+	8	6 5
	2 3	9 0

Ans. 23 m 90 cm

b.

	kg	g
	7 5	2 5 0
+	6 2	1 2 7
	1 3 7	3 7 7

Ans. 137 kg 377 g

c.

	km	m
	(1)	(1 1)
	4 2	1 7 5
+	6 9	6 7 5
	1 1 1	8 5 0

Ans. 111 km 850 m

d.

	l	m*l*
	(1)	(1 1)
	8	4 5 5
+	1 6	2 8 5
	2 4	7 4 0

Ans. 24 L 740 mL

4. Subtract :

Ans. a.

	kg	g
	(31)	(1100)
	3 2	1 0 0
−	1 7	4 0 0
	1 4	7 0 0

Ans. 14 kg 700 g

b.

	l	m*l*
	(9)	(1250)
	1 0	2 5 0
−	5	6 5 0
	4	6 0 0

Ans. 4 L 600 mL

c.

	km	m
	(54)	(1625)
	5 5	6 2 5
−	3 4	8 0 0
	2 0	8 2 5

Ans. 20 km 825 m

d.

	m	cm
	2 7	4 0
−	1 9	2 5
	8	1 5

Ans. 8 m 15 cm

Exercise 13.4

1. Multiply :

Ans. a.

	kg	g
	8	5 7 0
		× 5
	4 2	8 5 0

b.

	km	m
	6	4 0 9
		× 3
	1 9	2 2 7

c.

	k*l*	*l*
	4	8 5 4
		× 4
	1 9	4 1 6

2. Divide :

Ans. a.

km	m
6) 5382	(897
− 48	
58	
− 54	
42	
− 42	
0	

Ans. 897 m

b.

km	m
4) 21604	(5401
− 20	
16	
− 16	
04	
− 4	
0	

Ans. 5 km 401 m

c.

km	m
5) 8605	(1721
− 5	
36	
− 35	
10	
− 10	
5	
− 5	
0	

Ans. 1 km 721 m

d.

km	m
2) 4570	(2285
− 4	
5	
− 4	
17	
− 16	
10	
− 10	
x	

Ans. 2 km 285 m

Exercise 13.5

Solve :

Ans. 1. Arnav bought apples =
Arnav bought Mangoes =
Arnav bought Grapes =
Total weight of fruits =

	kg	g
	1	
	4	3 5 0
	1	6 0 0
+	2	3 0 0
	8	2 5 0

Hence, he bought 8 kg 250 g weight of fruits.

2. Total capacity of a vessel =
Used petrol =

	l	m*l*
	3 9	1000
	4 0	0 0 0
−	2 0	3 5 0
	1 9	6 5 0

Hence, 19 L 650 mL of petrol was still left in the vessel.

3. A can contains of fruit juice = 500 mL
So, 5 can contains of fruit juice = × 5
2500 mL
= 2 L 500 mL

Hence, 2 L 500 mL is capacity of 5 such cans.

4. Ajay purchased cloth for the suit =
Purchased cloth for the shirt =
Purchased cloth for the trouser =
Total length of the cloth =

	m	cm
	6	0 0
	2	2 0
+	1	2 0
	9	4 0

Hence, 9 m 40 cm is the total length of the cloths purchased by Ajay for different dresses.

5. Capacity of a oil packet = 750 mL
So, capacity of 4 oil packets = 750 × 4 mL
= 3000 mL or 3 L

Hence, 3 L will be the capacity of 4 such packets.

6. 5 students got sweets = 650 g
So, 1 student will get sweets = (650 ÷ 5) g = 130 g
Hence, each student will get 130 g sweets.

7. Rajsharee purchased milk =
Used milk =
Milk left =

	l	m*l*
	5	1250
	6	2 5 0
–	3	7 5 0
	2	5 0 0

Hence, 2L 500 mL was the total quantity of milk left.

8. Total length of electric wire =
length of used wire =
wire left =

	m	cm
	9 9	10
	1 0 0	0 0
+	5 6	4 0
	4 3	6 0

43 m 60 cm wire is left on the roll.

9. Jagan cycles in the morning =
Jagan cycles in the evening =
Total distance covered by Jagan =

	km	m
		1
	8	0 7 5
+	6	2 8 0
	1 4	3 5 5

Hence, Jagan cycles 14 km 355 m in all.

10. On a particular day, John travelled =
On a particular day, Pradeep travelled =
Difference their distance =

	km	m
	4	5 6 0
–	3	5 7 0
		9 9 0

Hence, John travelled more and by 990 m.

11. Weight of Sonakshi =
Weight of Arjun =
Difference between their age =

	km	g
	4 8	5 0 0
–	3 9	6 0 0
	8	9 0 0

Hence, Sonakshi is 8 kg 900 g heavier than Arjun.

12. Bharti purchased a ribbon of legnth = 500 m
Number of girls = 5
So, each girl got the ribbon = (500 ÷ 5) m
= 100 m
Hence, each child will get 100 m length of ribbon.

Let's Review

1. Tick (✓) the correct choice :

Ans. a. iii b. i c. iii d. i

2. Convert the following :

Ans. a. **2 km 375 m**

($\because$ 1 km = 1000 m)
= 2 × 1000 m + 375 m
= 2000 m + 375 m
= 2375 m

b. **34 cm 5 mm**

($\because$ 1 cm = 10 mm)
= 34 × 10 mm + 5 mm
= 340 mm + 5 mm
= 345 mm

c. **5 kg 903 g**

($\because$ 1 kg = 1000 g)
= 5 × 1000 g + 903 g
= 5000 g + 903 g
= 5903 g

d. **2004 mg**

($\because$ 1 mg = $\frac{1}{1000}$ g)
= 2000 mg + 4 mg
= (2000 ÷ 1000) g + 4 mg
= 2 g + 4 mg
= 2 g 4 mg

e. **5144 mL**

($\because$ 1 mL = $\frac{1}{1000}$ L)
= 5000 mL + 144 mL
= (5000 ÷ 1000) L + 144 mL
= 5 L + 144 mL
= 5 L 144 mL

f. **9291 m**

($\because$ 1 m = $\frac{1}{1000}$ km)
= 9000 m + 291 m
= (9000 ÷ 1000) km + 291 m
= 9 km + 291 m
= 9 km 291 m

g. **5 L 100 mL**

($\therefore$ 1 L = 1000 mL)
= 5 × 1000 mL + 100 mL
= 5000 mL + 100 mL
= 5100 mL

h. **15144 g**

($\because$ 1 g = $\frac{1}{1000}$ kg)
= 15000 g + 144 g
= (15000 ÷ 1000) kg + 144 g
= 15 kg + 144 g
= 15 kg 144 g

3. Add or subtract the following :

Ans. a.

	m	cm
	14	50
+	27	80
	42	30

b.

	kg	g
	14	970
+	16	380
	31	350

c.

	cm	mm
	25	5
–	14	9
	10	96

d.

	l	m*l*
	44	305
–	25	498
	18	807

4. Solve the following word problems.

Ans. a. Distance covered by bus =
Distance covered by auto =
Total distance =

	km	m
	8	060
+	2	750
	10	810

Hence, his school 10 km 810 m far from his home.

b. On Jack's birthday, his father bought milk from a dairy =
Used milk =
Milk left =

	l	m*l*
	6	050
–	4	965
	1	85

Hence 1 L 85 mL of milk was not used.

Exercise 14.1

1. Find the perimeter of the following.

Ans. Since, Perimeter of the figure of the figure = sum of all sides of figure.

a. Perimeter = 6 cm + 6 cm + 6 cm + 6 cm = 24 cm

b. Perimeter = 6 cm + 6 cm + 6 cm = 18 cm

c. Perimeter = 20 cm + 40 cm + 20 cm + 40 cm = 120 cm

d. Perimeter = 10 cm + 22 cm + 12 cm + 9 cm + 18 cm = 71 cm

e. Perimeter = 20 cm + 20 cm + 20 cm + 20 cm = 80 cm

f. Perimeter = 20 cm + 45 cm + 20 cm + 45 cm = 130 cm

2. Find the perimeter of each of the following figures :

Ans. We know that, perimeter = Sum of all the sides of a figure

a. Perimeter = 7 cm + 3 cm + 6 cm = 16 cm

b. Perimeter = 2.5 cm + 2.5 cm + 2.5 cm + 2.5 cm + 2.5 cm = 12.5 cm

c. Perimeter = 9 cm + 6 cm + 1 cm + 4 cm + 4 cm + 1 cm + 1 cm + 3 cm = 29 cm

d. Perimeter = 1 cm + 1.5 cm + 3 cm + 1 cm + 3 cm + 1.5 cm + 1 cm + 1.5 cm + 3 cm + 1 cm + 3 cm + 1.5 cm = 22 cm

e. Perimeter = 6 cm + 6 cm + 6 cm + 6 cm = 24 cm

f. Perimeter = 6 cm + 4 cm + 8 cm + 4 cm = 22 cm

Exercise 14.2

1. Find the perimeter of the following figures.

Ans.

a. Perimeter of a square = 4 × side = 4 × 14 cm = 56 cm

b. Perimeter of a rectangle = 2 (l + b) = 2 (18 + 10) cm
= 2 × 28 cm = 56 cm

c. Perimeter of a rectangle = 2 (l + b) = 2 (25 + 9) cm
= 2 × 34 cm = 68 cm

d. Perimeter of a triangle = Sum of three sides = 15 cm + 15 cm + 15 cm
= 45 cm

e. Perimeter of a square = 4 × side = 4 × 90 cm
= 36 cm

f. Perimeter of a rectangle = 2 (l + b) = 2 (128 + 45) cm
= 346 cm

2. Find the perimeters of rectangles whose length and breadth are as follows.

Ans. Since, perimeter of a rectangle = 2 (l + b)

a. **l = 15 cm, b = 8 cm**
∴ Perimeter = 2 (l + b) = 2 × (15 + 8) cm = 2 × (23 cm) = 46 cm

b. **l = 10 cm, b = 9 cm**
∴ Perimeter = 2 (l + b) = 2 (10 + 9) cm
= 2 × 19 cm = 38 cm

c. **l = 18 cm, b = 10 cm**
∴ Perimeter = 2 (l + b) = 2 × (18 + 10) cm
= 2 × 28 = 56 cm

d. **l = 97 cm, b = 25 cm**
∴ Perimeter = 2 (l + b)
= 2 × (97 + 25) cm = 2 × 122 cm = 244 cm

e. **l = 45 cm, b = 25 cm**

∴ Perimeter = 2 (l + b) = 2 (45 + 25) cm

= 2 × 70 cm = 140 cm

f. **l = 12.5 cm, b = 4.5 cm**

∴ Perimeter = 2 (l + b) = 2 × (12.5 + 4.5) cm

= 2 × 17 cm = 34 cm

3. Find the perimeters of square whose sides are as follows :

Ans. Since, perimeter of a square = 4 × side

a. **side = 4 cm**

∴ Perimeter = 4 × 4 cm = 16 cm

b. **side = 20 m**

∴ Perimeter = 4 × 20 m = 80 m

c. **side = 10 cm**

∴ Perimeter = 4 × side = 4 × 10 cm = 40 cm

d. **side = 43 cm**

∴ Perimeter = 4 × side = 4 × 43 m = 172 m

e. **side = 125 cm**

∴ Perimeter = 4 × 125 cm = 500 cm

f. **side = 14.5 m**

∴ Perimeter = 4 × 14.5 m = 58 m

Hots

1. Find the missing length .

Ans. a. b = 18 cm, l = ?

Perimeter = 86 m

∴ Perimeter of a rectangle = 2 (l + b)

86 m = 2 (l + 18)

86 m = 2l + 36

2l = (86 – 36) m

l = (50 ÷ 2) m

l = 25 m

b. Perimeter = 64 m

∴ Perimeter of a square = 4 × side

64 m = 4 × side

side = (64 ÷ 4) m

side = 16 m

c. Perimeter = 43 cm

∴ Perimeter of the given figure = Sum of its sides

43 cm = ? + 12 cm + 1 cm + 6 cm + 6 cm + 1 cm + 12 cm

43 cm = 38 cm + ?

? = 43 cm – 38 cm

? = 5 cm

d. Perimeter = 30 cm

∴ Perimeter of the given figure = Sum of its sides

30 cm = ? + 7 cm + 10 cm + 8 cm

30 cm = ? + 25 cm

? = (30 – 25) cm

? = 5 cm

Exercise 14.3

Solve :

Ans. 1. Length of a rectangular field = 60 m
Breadth of a rectangular field = 45 m
So, perimeter of a rectangular field = 2 (l + b) = 2 × (60 + 45) m
= 2 × 105 m
= 210 m
Thus, the length of required for fencing all around the rectangular field is 210 m.

2. Length of a table = 2 m
Breadth of a table = 1 m
So, perimeter of a table = 2 (2 + 1) m = 6 m
Since she bought lace = 10 m
∴ 10 m > 6 m
Therefore, the lace is sufficient.
There will be 4 m lace left.

3. Side of a square field = 60 m
So, perimeter = 4 × side
= 4 × 60 m = 240 m
Total distance = 1.2 km = 1.2 × 1000 m = 1200 m
So, number of round = $\frac{\text{Total distance}}{\text{Perimeter of a square}} = \frac{1200}{240} = 5$
Hence, a box will have 5 round a square plot of length 60 m to cover a distance of 1.2 km.

4. Perimeter of a park = 25 m + 30 m + 16 m + 15 m + 10 m + 12 m
= 108 m
Thus, the length of the wire required for fencing a park is 108 m.
The cost of fencing at the rate of ₹ 2 per meter = ₹ 2 × 108 = ₹ 216

5. Length of a rectangle = 770 m
Breadth of a rectangle = 640 m
∴ the perimeter of a rectangle = 2 (l + b) = 2 (770 + 640) m
= 2 × 1410 m = 2820 m

6. Length of a garden = 180 m
Breadth of a garden = 60 m
So, perimeter of a garden = 2 (l + b) = 2 × (180 + 60) m = 480 m
Now, length of required wire = perimeter of a garden = 480 m
Hence, 480 m wire is required for fencing all around it.

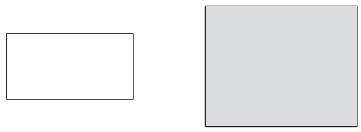
7. The perimeter of a square carpet = 200 m
∵ Perimeter of a square = 4 × side
∴ length of one side = $\frac{\text{Perimeter of the square}}{4}$
= $\frac{200 \text{ m}}{4} = 50$ m
Hence, 50 m is the length of one side.

8. Length of a rectangular field = 425 m
Breadth of a rectangular field = 120 m
So, perimeter of a rectangular field = 2 (l + b) = 2 (425 + 120) m
= 2 × 545 m
= 1090 m
The cost of fencing at the rate of ₹ 5 per metre = ₹ 5 × 1090 = ₹ 5450

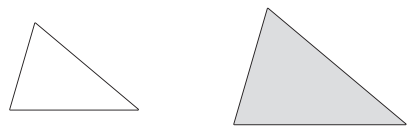
Exercise 14.4

1. Colour the shape which has the bigger surface area by blue and the smaller by green :

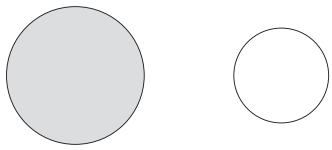
Ans. a.



b.



c.



d.

2. Find the areas of the following figures. The squares drawn here have sides 1 cm long. The first one is done for you.
Answer the following if side of each square is 1 cm and its area is 1 cm square.

Ans. b. The area of drawn figure = Number of square
= 12 sq. m
c. The area of drawn figure = Number of square
= 5 sq. cm
d. The area of drawn figure = Number of square
= 11 sq. cm
e. The area of drawn figure = Number of square
= 14 sq. cm
f. The area of drawn figure = Number of square
= 5 sq. cm.

3. Find the area of the following shapes. (1 □ = 1 cm^2 and half square = 1/2 cm^2)

Ans. a. The area of the given figure = Number of square
= 9 × 6 sq. cm = 54 sq. cm
b. Number of whole square = 12 squares
No. of square covered more than half = 14
Ignore the square which are covered less than half.
Total area = (12 × 1 + 14 × 1) sq. cm
= (12 + 14) sq. cm = 26 sq. cm
c. Number of whole square = 11 squares
No. of square covered more than half = 9 squares
Total area = (11 × 1 + 9 × 1) sq. cm
= (11 + 9) sq. cm = 20 sq. cm

Let's Review

1. Tick (✓) the correct choice :

Ans. a. i b. i c. ii d. iii

2. Find the perimeter of the following figures (in centimetres) :

Ans. a. The perimeter of given square = 4 × side
= 4 × 5 cm = 20 cm

b. The perimeter of given rectangle = 2 (l + b) = 2 × (8 + 3) cm
= 2 × 11 cm = 22 cm

c. The perimeter of given figure = 3 cm + 2 cm + 5 cm + 3 cm + 8 cm + 5 cm
= 26 cm

3. Find the area of the following figures. Assuming the side of each small square 1's 1 cm.

Ans. a. Number of whole squares = 8 squares
Number of half squares = 4 squares

Total area = $(8 \times 1 + \frac{1}{2} \times 4)$ sq. cm

= (8 + 2) sq. cm. = 10 sq. cm

b. Number of whole squares = 33 squares
Total area = 33 sq. cm.

c. Number of whole squares = 15 squares
Number of half squares = 5 squares

Total area = $(15 \times 1 + \frac{1}{2} \times 5)$ sq. cm

= (15 + 2.5) sq. cm = 17.5 sq. cm

4. Solve the following word problems :

Ans. a. Length of a rectangular park = 96 m
Breadth of a rectangular park = 64 m
So, perimeter of a rectangular park = 2 (l + b) = 2 × (96 + 64) m
= 2 × 160 m = 320 m

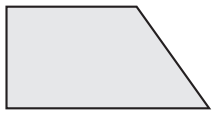
b. The perimeter of a square cloth = 220 cm

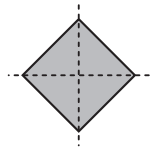
∴ length of the side of the square cloth = $\frac{220 \text{ cm}}{4}$ = 55 cm

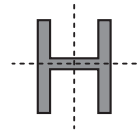
Unit Fifteen : Symmetry and Patterns

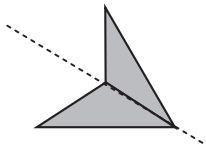
Exercise 15.1

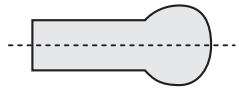
1. Which among the following figures are symmetrical? Draw lines of symmetry.

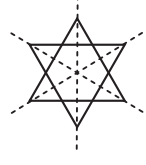
Ans. a. 

b. 

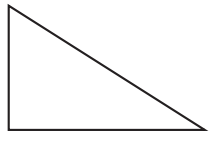
c. 

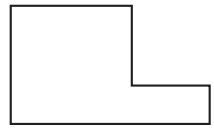
d. 

e. 

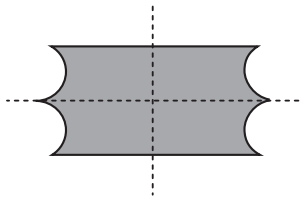
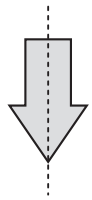
f. 

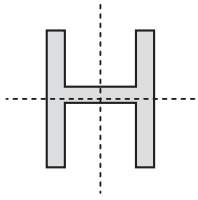
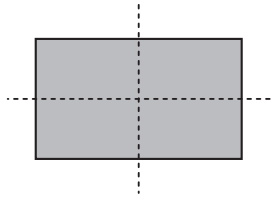
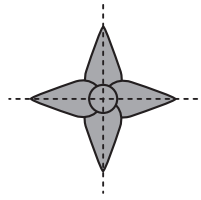
g. 

h. 

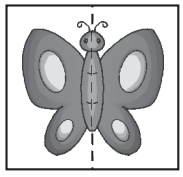
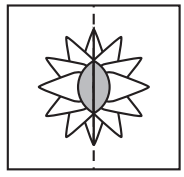
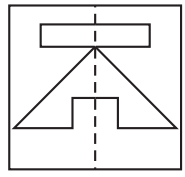
i. 

2. Draw the line(s) of symmetry for the following figures.

Ans. a.  b.  c. 

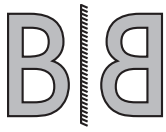
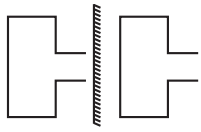
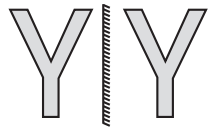
d.  e.  f. 

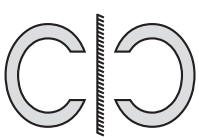
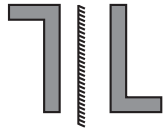
3. Complete the figure by drawing the second half :

Ans. a.  b.  c. 

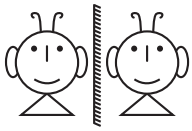
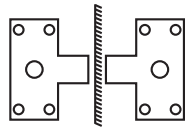
Exercise 15.2

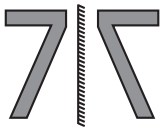
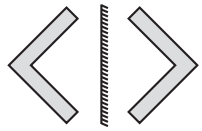
1. Mark a tick (✓) for the figure that are examples of reflections.

Ans. a.  ○ b.  ○ c.  ✓

d.  ✓ e.  ✓ f.  ○

2. Draw the reflections of the given shapes.

Ans. a.  b.  c. 

d.  e.  f. 

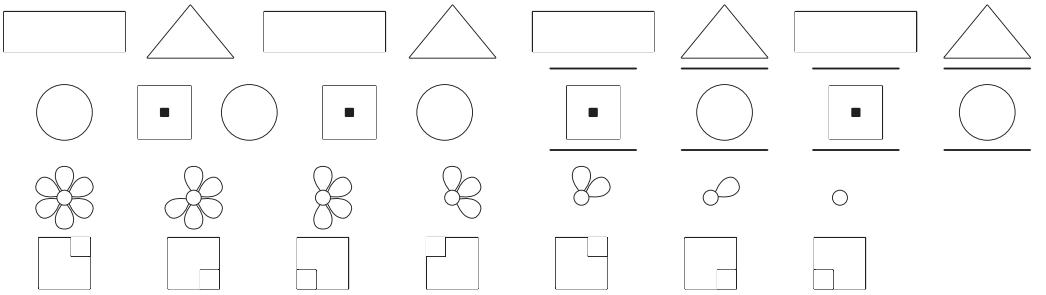
Mental Maths

1. Complete the series and make two number series of your own.

Ans. a. 6, 8, 10, 12, 14, **16**, **18**, **20**, **22**.
b. 236, 246, 256, **266**, **276**, **286**, **296**.
c. 11, 22, 33, **44**, **55**, **66**, **77**.
d. 3, 6, 12, **24**, **36**, **72**, **144**.

2. Complete the series and make two series of your own with shapes.

Ans.



Exercise 15.3

1. Look for the pattern and complete the series :

Ans. a. 12, 22, 32, 42, **52**, **62**, **72**, **82**
b. 24, 22, 20, 18, **16**, **14**, **12**, **10**
c. 34, 56, 78, 100, **122**, **144**, **166**, **188**
d. 201, 301, 401, 501, **601**, **701**, **801**, **901**
e. 65, 60, 55, 50, 45, **40**, **35**, **30**, **25**
f. 1246, 2246, 3246, **4246**, **5246**, **6246**, **7246**

2. Complete the following patterns.

Ans. a. $42 \div 6 = 7$
$420 \div 6 = 70$
$4200 \div 6 =$ **700**
$42000 \div 6 =$ **7000**

b. $121 \times 11 = 1331$
$1221 \times 11 = 13431$
$12221 \times 11 =$ **134431**
$122221 \times 11 =$ **1344431**

c. $150 - 9 = 141$
$149 - 8 = 141$
148 $- 7 = 141$
147 $- 6 = 141$

d. $(1 \times 200) + 2 = 202$
$(2 \times 200) + 3 = 403$
$(3 \times 200) + 5 =$ **604**
$(4 \times 200) + 5 =$ **805**

3. Find the missing number and complete the number towers :

Ans. a.

	15	
7		8
4	3	5

b.

	33	
20		13
19	1	12

c.

	96	
12		8
6	2	4

4. a. Use the following codes to code the given messages.

Ans. (i) Keep your city clean.
16 22 2 11 2 12 6 9 24 18 7 2 24 15 22 26 13

(ii) Respect Your elders
9 22 8 11 22 24 7 2 12 6 9 22 15 23 22 9 8

b. Now decode these messages.

(i) 18 15 12 5 22 14 2 24 12 6 13 7 9 2
I love my country

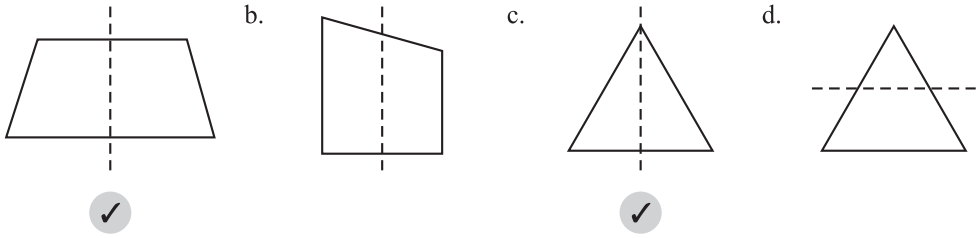
(ii) 8 26 5 22 4 26 7 22 9 26 13 23 22 15 22 24 7 9 18 24 18 7 2
Save water and electricity.

(iii) 19 26 11 11 2 23 18 4 26 15 18
Happy diwali

Let's Review

1. Tick (✓) the pictures which show the correct line of symmetry.

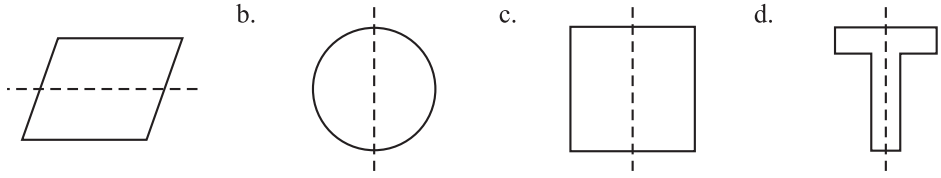
Ans. a. b. c. d.



✓ ✓

2. Draw the lines of symmetry for the following if possible.

Ans. a. b. c. d.



3. Draw the mirror image for the following figures.

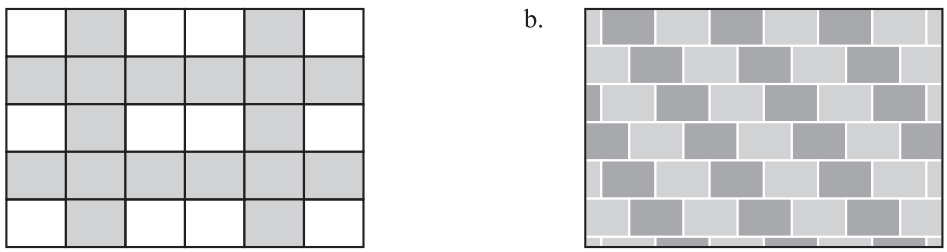
Ans. a. b. c.

4. Complete the following patterns.

Ans. a. 329 324, **319, 314, 309,** 205
b. 130, 127, **124, 121,** 118, **115**
c. 27, **25,** 23, 21, **19, 17**
d. 193, 195, **197, 199,** 201, 203

5. Draw the following in your notebook and colour them to form a patterns.

Ans. a. b.



Unit Sixteen : Data Handling

Exercise 16.1

1. The following pictograph shows the number of cycles sold by a shop from Monday to Saturday :

Ans. a. On Tuesday, the minimum number of cycles were sold.
b. 12 motorcycles were sold on. Wednesday than on Tuesday.
c. 20 cycles were sold on Saturday.
d. 68 cycles in all were sold by the shop in 6 days.

2. Read the data table that tells the favourite colour of children of class IV.

Ans. a. Green colour is liked by most children.
b. Red colour is liked by least children.
c. Pink and blue colours are liked by equal number of children.
d. 2 more children like pink the red.
e. 70 children were asked in all.

3. A survey was conducted among a group of students about the subject they like most.

Ans. a. Mathematics is liked most.
b. 10 students is liked EVS.
c. 14 students is liked English.
d. 50 students.

Exercise 16.2

1. Observe the bar graph given below and answer the following questions.

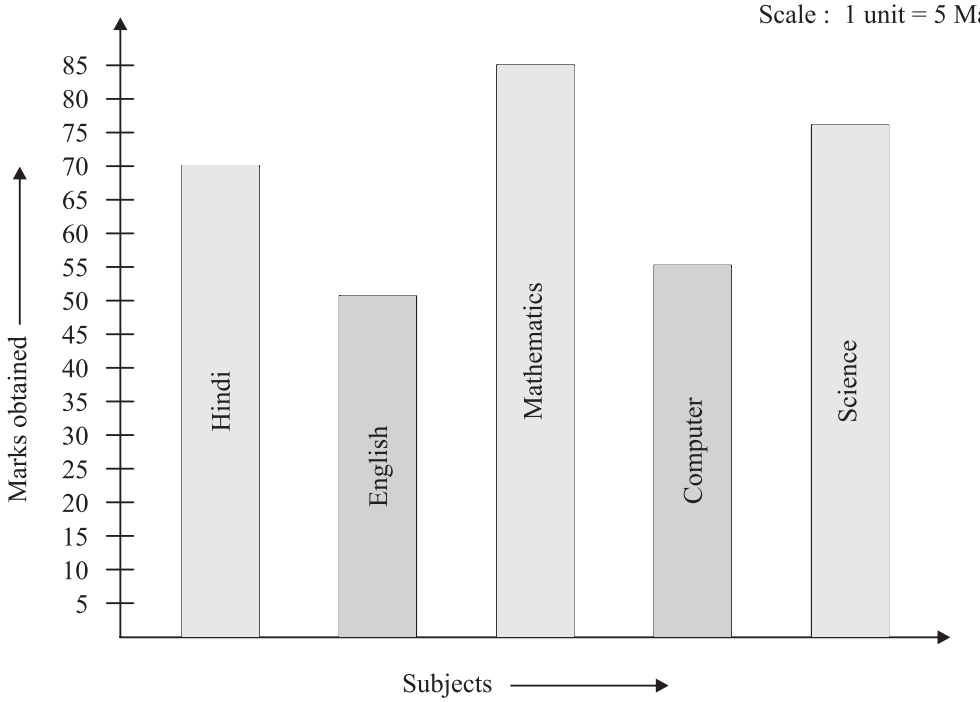
Ans. a. 28 students favourite pass time activity is reading.
b. Drawing is liked by the least number of students.
c. 16 more students like playing than drawing.
d. 24 students.

2. Bar graph given below shows the number of toffees sold by a shop on each day of a certain week.

Ans. a. On Tuesday, the maximum number of toffees were sold.
b. On Sunday, the minimum number of toffees were sold.
c. 35 more toffees were sold on Tuesday than on Sunday.
d. 380 toffees were sold during this week.
e. Monday and Wednesday, the sales of toffees were the same.

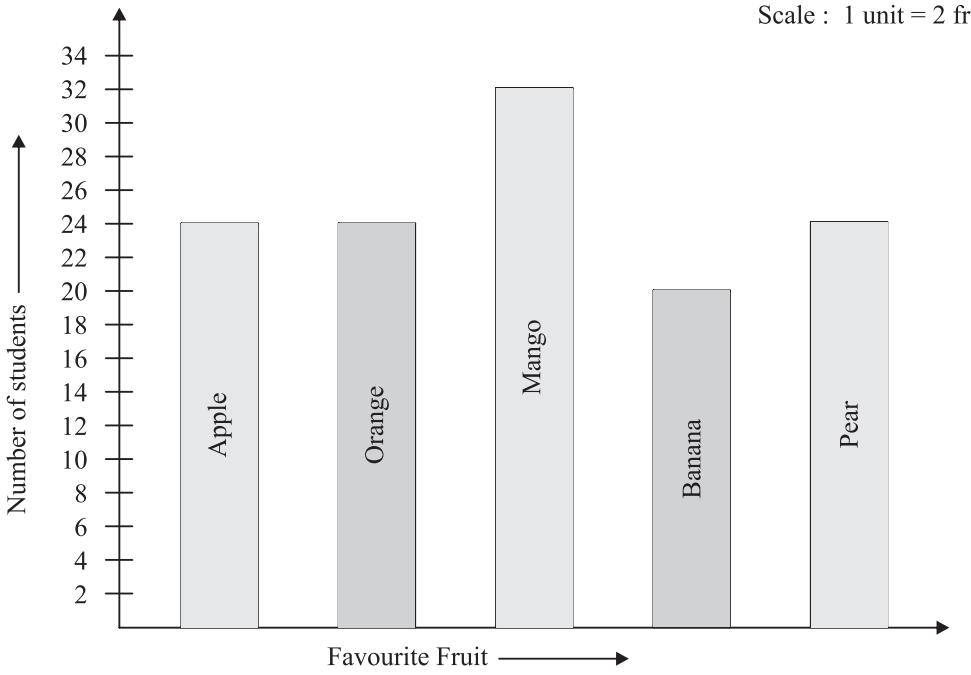
3. The following table shows the marks obtained by Neha in the annual examination :

Ans. For the given data, left us prepare a bar graph as follows



4. Favourite fruit of class IV students one showing in the table :

Ans. For the given data. let us prepare a bar graph as follows.



Exercise 16.3

1. Here is a pie chart showing number of children in Indian families.

Ans. a. $\frac{1}{4}$ part of families includes exactly 2 children.

b. No children is the largest category shown. c. $\frac{1}{4}$ part of families has 1 child.

2. All children of a school participated in two sports. The pie chart shows the number of children in different sports. See the pie chart and answer the following questions :

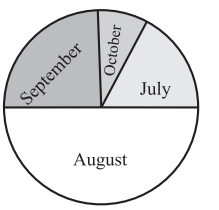
Ans. a. $\frac{3}{4}$ part of children participated in cricket.

b. $\frac{1}{4}$ part of children participated in basketball.

3. Draw a pie graph of the following data :
Number of toys sold in different months.

Ans.

Month	Number of toys	Fractions of total number of toys
July	15	$\frac{15}{120} = \frac{1}{8}$
August	60	$\frac{60}{120} = \frac{1}{2}$
September	30	$\frac{30}{120} = \frac{1}{4}$



October	15	$\frac{15}{120} = \frac{1}{8}$

Let's Review

1. Tick (✓) the correct choice :

Ans. a. i. b. i.

2. The bar graph shows the marks obtained by Hari is different subjects in annual examination.

Study the bar graph and answer the questions that below :

Ans. a. Hari got 80 marks in Mathematics.

b. Hari got the lowest marks in English and 40 marks.

c. 330 is total marks obtained by Hari.

3. The following information is above the different kinds of programmes that children which on television these days.

Draw a bar graph to represent the information given using 1 cm = 5 children.

Ans. For the given data. Let us prepare a bar graph as follows.

Scale : 1 unit = 5 children