Key Book

Calculative

MATHS

Class 4

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Unit 1

Counting upto 10000000

ایک کروڑ تک شمار کرنا

EXERCISE مشق 1.1

A Count and write the next number. شمار کریں اور اگلا عدد لکھیں۔

1. 99999 — 100000 , 100001 , 100002 , 100003
2. 109999 — 110000 , 110001 , 110002 , 110003
3. 209999 — 210000 , 210001 , 210002 , 210003
4. 309999 — 310000 , 310001 , 310002 , 310003
5. 409999 — 410000 , 410001 , 410002 , 410003
6. 509999 — 510000 , 510001 , 510002 , 510003

B Write the place value of the encircled number. دائرے والے عدد کی مقامی قیمت لکھیں۔

1. 9 (7) 4 3 5 9 7 — 700000
2. 8 2 (3) 1 9 3 2 — 30000
3. 4 8 (8) 6 4 7 2 — 80000
4. (3) 9 8 6 5 5 2 — 3000000
5. 2 0 (7) 8 8 2 9 — 70000
6. 7 5 (6) 0 7 9 3 — 60000

C Write down the predecessor and successor of the following numbers.
مندرجہ ذیل اعداد سے پہلے آنے والا اور بعد میں آنے والا عدد لکھیں۔

1.	7620626	7620627	7620628
2.	666987	666988	666989
3.	895099	895100	895101
4.	7056771	7056772	7056773
5.	893584	893585	893586

D Write in numerals. اعداد (ہندسوں) میں لکھیں۔

1. Thirty lac, thirty five thousand, three hundred and ninety nine. — 3035399
2. Twenty nine lac, six thousand, five hundred and fifty four. — 2906554
3. Ninety three lac, twenty thousand, eighty four. — 9320084
4. Five lac, six thousand, eight hundred and ninety two. — 506892
5. Sixty three lac, five thousand, three hundred and one. — 6305301

E Write the given numbers in words. دیے گئے اعداد کو الفاظ میں لکھیں۔

1. 5927432
   Fifty nine lac, twenty seven thousand, four hundred and thirty two
2. 9996688
   Ninety nine lac, ninety six thousand, six hundred and eighty eight.
3. 809908
   Eight lac, nine thousand, nine hundred and eight.
4. 3003003
   Thirty lac, three thousand and three.
5. 4409508
   Forty four lac, nine thousand, five hundred and eight.

EXERCISE مشق 1.2

A Write in Urdu numerals. اردو اعداد لکھیں۔

Standard numerals									
0	1	2	3	4	5	6	7	8	9
Urdu numerals									
۰	۱	۲	۳	۴	۵	۶	۷	۸	۹

B Write in standard numerals. معیاری اعداد میں لکھیں۔

1. ۴۳۶۵ — 4365
2. ۲۸۶۸ — 2868
3. ۵۹۸۲ — 5982
4. ۶۶۶۲۸ — 66628
5. ۴۶۷۵۴ — 46754

C Write in Urdu numerals. اردو اعداد میں لکھیں۔

1. 42587 — ۴۲۵۸۷
2. 55378 — ۵۵۳۷۸
3. 96321 — ۹۶۳۲۱
4. 496632 — ۴۹۶۶۳۲
5. 963428 — ۹۶۳۴۲۸

EXERCISE مشق 1.3

A Encircle the greatest number. سب سے بڑے عدد پر دائرہ لگائیں۔

1. 799459 699795 594946 **3023799**
2. 480467 220556 **520645** 440654
3. 3557283 8752285 **9558723** 6773232
4. 3751207 6651307 **9558723** 6773232
5. 403533 723334 **824533** 504447

B Write the following in number. اعداد (ہندسوں) میں لکھیں۔

1. Sixty six lac, thirty two thousand, six hundred and thirty five. 6632635
2. Two crore, fifty five lac, sixty six thousand, three hundred and seventy eight. 25566378
3. Twenty one lac, thirty thousand, six hundred and ninety five. 2130695
4. Three crore, seventy six lac, four thousand and two hundred. 37604200
5. Thirty four lac, twenty thousand and sixty nine. 3420069

C Arrange the following numbers in ascending order and descending order. مندرجہ ذیل اعداد کو ترتیب صعودی اور ترتیب نزولی میں لکھیں۔

1. 44396054, 45413467, 44439609, 44056898, 44006598

Ascending: 44006598, 44056898, 44396054, 44439609, 45413467

Descending: 45413467, 44439609, 44396054, 44056898, 44006598

2. 60606060, 61606160, 81818090, 91400414, 44144131

Ascending: 44144131, 60606060, 61606160, 81818090, 91400414

Descending: 91400414, 81818090, 61606160, 60606060, 44144131

3. 658465, 32656778, 32556776, 36456772, 34217653

Ascending: 658465, 32556776, 32656778, 34217653, 36456772

Descending: 36456772, 34217653, 32656778, 32556776, 658465

EXERCISE مشق 1.4

A Write as a Roman Numeral. رومن اعداد میں لکھیں۔

1. 148 CXLVIII
2. 125 CXXV
3. 437 CDXXXVII
4. 587 DLXXXVII
5. 1259 MCCLIX
6. 1560 MDLX
7. 2326 MMCCCXXVI

B Write as a Roman Numeral. رومن اعداد میں لکھیں۔

1. 50 + (10 − 3) = LVII
2. (1000 − 100) + (50 − 10) + 1 = CMXLI
3. 100 + (10 − 1) = CIX

C Write in Decimal Numbers. اعداد (ہندسوں) میں لکھیں۔

1. LXXIII 73
2. XXIX 29
3. CMXXXIX 939

Unit 2

Multiplication ضرب

EXERCISE مشق 2.1

A Multiply the following. درج ذیل کو ضرب دیں۔

1. 350 by 221

```
  350
x 221
-----
  350
 7000
70000
-----
77350
```

2. 250 by 183

```
  250
x 183
-----
  750
20000
25000
-----
45750
```

3. 291 by 113

```
  291
x 113
-----
  873
 2910
29100
-----
32883
```

4. 353 by 194

```
  353
x 194
-----
 1412
31770
35300
-----
68482
```

5. 320 by 245

```
  320
x 245
-----
 1600
12800
64000
-----
78400
```

6. 400 by 263

```
  400
x 263
-----
 1200
24000
80000
-----
105200
```

7. 449 by 235

```
  449
x 235
-----
 2245
13470
89800
-----
105515
```

8. 735 by 423

```
  735
x 423
-----
 2205
14700
294000
-----
310905
```

9. 338 by 379

```
  338
x 379
-----
 3042
23660
101400
-----
128102
```

10. 852 by 376

```
  852
x 376
-----
 5112
59640
255600
-----
320352
```

11. 1407 by 634

```
 1407
x 634
-----
 5628
42210
844200
------
892038
```

12 1123 by 386

```
 1123
x 386
-----
 6738
89840
336900
------
433478
```

B Find the product. حاصل ضرب معلوم کریں۔

1. 321 x 111

```
  321
x 111
-----
 321
3210
32100
-----
35631
```

2. 231 x 123

```
  231
x 123
-----
 693
4620
23100
-----
28413
```

3. 456 x 325

```
  456
x 325
-----
 2280
 9120
136800
------
148200
```

4. 632 x 183

```
  632
x 183
-----
 1896
50560
63200
------
115656
```

5. 438 x 273

```
  438
x 273
-----
 1314
30660
87600
------
119574
```

6. 743 x 762

```
  743
x 762
-----
 1486
44580
520100
------
566166
```

7. 658 x 323

```
   658
 x 323
------
  1974
 13160
197400
------
212534
```

8. 854 x 636

```
   854
 x 636
------
  5124
 25620
512400
------
543144
```

9. 203 x 437

```
   203
 x 437
------
  1421
  6090
 81200
------
 88711
```

10. 832 x 320

```
   832
 x 320
------
  0000
 16640
249600
------
266240
```

11. 416 x 282

```
   416
 x 282
------
   832
 33280
 83200
------
117312
```

12 326 x 708

```
   326
 x 708
------
  2608
  0000
228200
------
230808
```

EXERCISE مشق 2.2

Words Problem عبارتی سوالات

1. If the cost of one book is 60 rupees then find the cost of 1800 books?

اگر ایک کتاب 60 روپے کی ہے تو 1800 کتابوں کی قیمت معلوم کریں۔

Cost of one book = 60

Cost of 1800 book = 60 x 1800 = 10800

```
  1800
 x  60
------
  0000
 10800
------
 10800
```

2. 48 boys can sit in a room. How many boys will sit 358 rooms?

ایک کمرے میں 48 لڑکے بیٹھ سکتے ہیں۔ 358 کمروں میں کتنے لڑکے بیٹھیں گے؟

Boys can sit in a room = 48

Boys can sit in 358 rooms = 48 x 358 = 17184

```
  358
x  48
-----
 2864
14320
-----
17184
```

3. The price of one dog is 2372 rupees. Find the price of 8 dogs?

ایک کتے کی قیمت 2372 روپے ہے۔ 8 کتوں کی قیمت معلوم کریں۔

Price of one dog = 2372

Price of 8 dogs = 2372 x 8 = 18976

```
 2372
x   8
-----
18976
-----
```

4. The weight of a cow is 386 kg. Find the weight of 135 cows?

ایک گائے 386 کلو گرام وزن کی ہے۔ 135 گائے کتنے وزن کی ہوں گی۔

The weight of a cow = 386

The weight of 135 cows = 386 x 135 = 52110

```
  386
x 135
-----
 1930
11580
38600
-----
52110
```

5. A girl can type 78 words in a minute. How many words could she type in 240 minutes?

ایک لڑکی 78 الفاظ فی منٹ ٹائپ کرتی ہے۔ وہ 240 منٹوں میں کتنے الفاظ ٹائپ کرے گی؟

Girl types words in a minute = 78

Girl types words in 240 = 78 x 240 = 18720

```
  240
x  78
-----
 1920
16800
-----
18720
```

Unit 3

Division تقسیم

EXERCISE مشق 3

A Find the quotients and remainders. Check your answer.

حاصل قسمت اور باقی معلوم کریں۔ اپنے جواب کی پڑتال کریں۔

① $4\overline{)47}$

$$\begin{array}{r} 11 \\ 4\overline{)47} \\ -44 \\ \hline 3 \end{array}$$

Check

$$\begin{array}{r} 11 \\ \times\ 4 \\ \hline 44 \\ +\ 3 \\ \hline 47 \end{array}$$

② $6\overline{)53}$

$$\begin{array}{r} 8 \\ 6\overline{)53} \\ -48 \\ \hline 5 \end{array}$$

Check

$$\begin{array}{r} 8 \\ \times\ 6 \\ \hline 48 \\ +\ 5 \\ \hline 53 \end{array}$$

③ $5\overline{)26}$

$$\begin{array}{r} 5 \\ 5\overline{)26} \\ -25 \\ \hline 1 \end{array}$$

Check

$$\begin{array}{r} 5 \\ \times\ 5 \\ \hline 25 \\ +\ 1 \\ \hline 26 \end{array}$$

④ $3\overline{)18}$

$$\begin{array}{r} 6 \\ 3\overline{)18} \\ -18 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 6 \\ \times\ 3 \\ \hline 18 \end{array}$$

⑤ $4\overline{)54}$

$$\begin{array}{r} 13 \\ 4\overline{)54} \\ -52 \\ \hline 2 \end{array}$$

Check

$$\begin{array}{r} 13 \\ \times\ 4 \\ \hline 52 \\ +\ 2 \\ \hline 54 \end{array}$$

⑥ $6\overline{)58}$

$$\begin{array}{r} 9 \\ 6\overline{)58} \\ -54 \\ \hline 4 \end{array}$$

Check

$$\begin{array}{r} 9 \\ \times\ 6 \\ \hline 54 \\ +\ 4 \\ \hline 58 \end{array}$$

B Divide and check.

تقسیم کریں اور پڑتال کریں۔

① $2\overline{)614}$

$$\begin{array}{r} 307 \\ 2\overline{)614} \\ -60 \\ \hline 14 \\ 14 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 307 \\ \times\ 2 \\ \hline 614 \end{array}$$

② $6\overline{)636}$

$$\begin{array}{r} 106 \\ 6\overline{)636} \\ -60 \\ \hline 36 \\ 36 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 106 \\ \times\ 6 \\ \hline 636 \end{array}$$

③ $3\overline{)921}$

$$\begin{array}{r} 307 \\ 3\overline{)921} \\ -90 \\ \hline 21 \\ 21 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 307 \\ \times\ 3 \\ \hline 921 \end{array}$$

④ $15\overline{)675}$

$$\begin{array}{r} 45 \\ 15\overline{)675} \\ -60 \\ \hline 75 \\ 75 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 45 \\ \times\ 15 \\ \hline 225 \\ 450 \\ \hline 675 \end{array}$$

⑤ $18\overline{)342}$

$$\begin{array}{r} 19 \\ 18\overline{)342} \\ -18 \\ \hline 162 \\ 162 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 19 \\ \times\ 18 \\ \hline 152 \\ 190 \\ \hline 342 \end{array}$$

⑥ $25\overline{)300}$

$$\begin{array}{r} 12 \\ 25\overline{)300} \\ -25 \\ \hline 50 \\ 50 \\ \hline 0 \end{array}$$

Check

$$\begin{array}{r} 12 \\ \times\ 25 \\ \hline 60 \\ 240 \\ \hline 300 \end{array}$$

C Word Problems: عبارتی سوالات

1. An ice-cream cup costs Rs. 27. How many cups can be bought for Rs. 162?

ایک آئسکریم کپ 27 روپے کا ہے۔ 162 روپے میں کتنے کپ خریدے جا سکتے ہیں۔

$$\begin{array}{r} 6 \\ 27\overline{)162} \\ -162 \\ \hline 0 \end{array}$$

162 ، 27 = 6

2. 8 buses can carry 160 passengers. How many passenger can be seated in a bus?

8 بسیں 160 مسافر لے جا سکتی ہیں۔ ایک بس کتنے مسافر لے جا سکتی ہے؟

$$\begin{array}{r} 20 \\ 8\overline{)160} \\ -160 \\ \hline 0 \end{array}$$

160 ، 8 = 20

3. There are 126 trees in 9 rows. How many trees are there in each row?

9 قطاروں میں 126 درخت ہیں۔ ہر قطار میں کتنے درخت ہیں؟

$$\begin{array}{r} 14 \\ 9\overline{)126} \\ -9 \\ \hline 36 \\ 36 \\ \hline 0 \end{array}$$

126 ، 9 = 14

4. Rs. 980 are distributed among 28 persons. How many rupees will each person get?

980 روپے 28 اشخاص کے درمیان تقسیم کیے گئے۔ ہر شخص کو کتنے روپے ملیں گے؟

$$\begin{array}{r} 35 \\ 28\overline{)980} \\ -980 \\ \hline 0 \end{array}$$

980 ، 28 = 35

Unit 4

Multiples and Factors

اضعاف اور عاد

EXERCISE مشق 4.1

A Find all the factors of the following numbers.

مندرجہ ذیل اعداد کے تمام عاد معلوم کریں۔

1. 18 = 1, 2, 3, 6, 9, 18
2. 24 = 1, 2, 3, 4, 6, 8, 12, 24
3. 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36
4. 55 = 1, 5, 11, 55
5. 60 = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

B Find the missing factor.

غائب عاد معلوم کریں۔

1. 8 x 4 = 32
2. 7 x 4 = 28
3. 5 x 6 = 30
4. 3 x 8 = 24
5. 2 x 6 = 12
6. 9 x 5 = 45
7. 6 x 7 = 42
8. 9 x 8 = 72
9. 8 x 10 = 80

C Find the three multiples of the following numbers.

مندرجہ ذیل اعداد کے تین اضعاف معلوم کریں۔

1. 2 = 4, 6, 8
2. 3 = 6, 9, 12
3. 5 = 10, 15, 20
4. 8 = 16, 24, 32

D Separate all the multiples of 7.

7 کے تمام اضعاف علیحدہ کریں۔

15, 21, 42, 55, 63, 99, 77, 135, 112

Multiples of 7 = 21, 42, 63, 77, 112

EXERCISE مشق 4.2

A Find the H.C.F of the following numbers. مندرجہ ذیل اعداد کے عاد اعظم معلوم کریں۔

1. 6 and 12

Solution: The factors of 6 are: 1, 2, 3, 6
The factors of 12 are: 1, 2, 6, 12
The common factors are: 1, 2, 6

The highest common factor is 6.

2. 84 and 80

Solution: The factors of 84 are: 1 , 2, 3, 4, 6, 7, 12, 14, 21, 28, 42, 84
The factors of 80 are: 1, 2, 4, 5, 8, 10, 16, 20, 40, 80
The common factors are: 1,2,4

The highest common factor is 4.

3. 7, 21, 35

Solution: The factors of 7 are: *1, 7*
The factors of 21 are: 1, 3, 7, 21
The factors of 35 are: 1, 5, 7, 35
The common factors are: *1,7*

The highest common factor is 7.

4. 16, 32 and 64

Solution: The factors of 16 are: 1, 2, 4, 8, 16
The factors of 32 are: 1, 2, 4, 8, 16, 32
The factors of 64 are: 1, 2, 4, 8, 16, 32, 64
The common factors are: 1,2, 4, 8, 16

The highest common factor is 16.

5. 6, 12 and 36

Solution: The factors of 6 are: *1, 2, 3, 6*
The factors of 12 are: 1, 2, 3, 4, 6, 12
The factors of 36 are: 1, 2, 3, 4, 6, 9, 12, 18, 36
The common factors are: *1,2,3,6*

The highest common factor is 6.

6. 32, 38 and 48

Solution: The factors of 32 are: 1, 2, 4, 8, 16, 32

The factors of 38 are: 1, 2, 19, 38

The factors of 48 are: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

The common factors are: *1,2*

The highest common factor is 2.

B Find the L.C.M of the following. مندرجہ ذیل کے ذواضعاف اقل معلوم کریں۔

1. 6, 8

Solution: Multiples of 6 are = 6,12, 18, 24, 30, 36, 42, 48, 54, 60

Multiples of 8 are = 8,16, 24, 32, 40, 48, 56, 64, 72, 80

Common multiples of 6 and 8 are 24, 48, ...

The smallest common multiple is 24.

2. 4, 8

Solution: Multiples of 4 are = 4, 8, 12, 16, 20, 24, 28, 32, 36, 40

Multiples of 8 are = 8,16, 24, 32, 40, 48, 56, 64, 72, 80

Common multiples of 4 and 8 are *8, 16, 24,* .....

The smallest common multiple is 8.

3. 3, 6, 12

Solution: Multiples of 3 are = 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36,

Multiples of 6 are = 6,12, 18, 24, 30, 36, 42, 48, 54, 60

Multiples of 12 are = 12, 24, 36, 48, 60, 72, 84, 96, 108, 120,

Common multiples of 3, 6 and 12 are 12, 24.....

The smallest common multiple is 12.

4. 6, 12, 24

Solution: Multiples of 6 are = 6,12, 18, 24, 30, 36, 42, 48, 54, 60

Multiples of 12 are = 12, 24, 36, 48, 60, 72, 84, 96, 108, 120

Multiples of 24 are = 24, 48, 72, 96, 120, 144, 168, 192, 216, 240,

Common multiples of 6, 12, and 24 are *24, 48,*

The smallest common multiple is 24.

C Find the L.C.M of the followings by using Division Method.

مندرجہ ذیل کے ذواضعاف اقل بذریعہ تقسیم معلوم کریں۔

1. 12, 18, 24

Solution:

L.C.M = 2 x 2 x 2 x 3 x 3

= 72

L.C.M = 72

2	12 , 18 , 24
2	6 , 9 , 12
2	3 , 9 , 6
3	3 , 9 , 3
3	1 , 3 , 1
	1 , 1 , 1

2. 10, 16, 32

Solution:

L.C.M = 2 x 2 x 2 x 2 x 2 x 5

= 160

L.C.M = 160

2	10 , 16 , 32
2	5 , 8 , 16
2	5 , 4 , 8
2	5 , 2 , 4
2	5 , 1 , 2
5	5 , 1 , 1
	5 , 1 , 1

3. 8, 16, 36

Solution:

L.C.M = 2 x 2 x 2 x 2 x 3 x 3

= 144

L.C.M = 144

2	8 , 16 , 36
2	4 , 8 , 18
2	2 , 4 , 9
2	1 , 2 , 9
3	1 , 1 , 9
3	1 , 1 , 3
	1 , 1 , 1

4. 5, 10, 15

Solution:

L.C.M = 2 x 3 x 5

= 30

L.C.M = 30

2	5 , 10 , 15
3	5 , 5 , 15
5	5 , 5 , 5
	1 , 1 , 1

Unit 5

Fractions کسور

In the previous class, we have learnt about fractions. Let us revise it.

پچھلی جماعت میں ہم کسور کے بارے میں سیکھ چکے ہیں۔ آیئے اس کی دہرائی کریں۔

EXERCISE مشق 5.1

A Reduce the following fractions to their lowest terms.

مندرجہ ذیل کسور کو ان کی مختصر ترین شکل میں لکھیں۔

1. $\frac{25}{40} = \frac{5 \times 5}{5 \times 8} = \frac{5}{8}$

2. $\frac{16}{48} = \frac{4 \times 4 \times 1}{4 \times 4 \times 3} = \frac{1}{3}$

3. $\frac{66}{121} = \frac{11 \times 6}{11 \times 11} = \frac{6}{11}$

4. $\frac{110}{225} = \frac{5 \times 22}{5 \times 45} = \frac{22}{45}$

B Change into improper fractions.

غیر واجب کسور میں تبدیل کریں۔

1. $5\frac{6}{11} = \frac{61}{11}$

2. $7\frac{3}{7} = \frac{52}{7}$

3. $23\frac{17}{19} = \frac{454}{19}$

4. $23\frac{4}{27} = \frac{625}{27}$

C Write these as mixed fractions.

مخلوط کسور میں لکھیں۔

1. $\frac{25}{4} = 6\frac{1}{4}$

2. $\frac{56}{9} = 6\frac{2}{9}$

3. $\frac{78}{25} = 3\frac{3}{25}$

4. $\frac{147}{31} = 4\frac{23}{31}$

D Add the following fractions.

مندرجہ ذیل کسور کو جمع کریں۔

1. $\frac{4}{5} + \frac{3}{7} = \frac{28 + 15}{35} = \frac{43}{35}$

2. $3\frac{1}{3} + 2\frac{1}{2} = \frac{10}{3} + \frac{5}{2} = \frac{20 + 15}{6} = \frac{35}{6}$

3. $4\frac{3}{7} + 5\frac{1}{4}$

$= \frac{31}{7} + \frac{21}{4}$

$= \frac{124 + 147}{28} = \frac{271}{28}$

4. $7\frac{5}{9} + 4\frac{3}{4}$

$= \frac{63}{9} + \frac{19}{4}$

$= \frac{252 + 171}{36} = \frac{423}{36}$

E Subtract the following fractions. مندرجہ ذیل کسور کو تفریق کریں۔

1. $8\frac{1}{7} - 3\frac{2}{7}$

$= \frac{57}{7} - \frac{23}{7}$

$= \frac{57 - 23}{7} = \frac{34}{7}$

2. $4\frac{1}{3} - 2\frac{3}{4}$

$= \frac{13}{9} - \frac{11}{4}$

$= \frac{52 - 99}{36} = \frac{47}{36}$

3. $9\frac{2}{5} - 6\frac{3}{10}$

$= \frac{47}{5} - \frac{63}{10}$

$= \frac{94 - 63}{10} = \frac{31}{10}$

4. $6\frac{2}{3} - 4\frac{7}{10}$

$= \frac{20}{3} - \frac{47}{10}$

$= \frac{200 - 141}{30} = \frac{59}{30}$

EXERCISE مشق 5.2

A Add the following fractions. مندرجہ ذیل کسور کو جمع کریں۔

(1) $\frac{2}{3} + \frac{3}{4}$

$= \frac{8 + 9}{12} = \frac{17}{12}$

$= 1\frac{5}{12}$

2	3 , 4
2	3 , 2
3	3 , 1
	1 , 1

2 x 2 x 3 = 12

$12\overline{)17}\ 1$, -12, 5

(2) $\frac{3}{10} + \frac{4}{15}$

$= \frac{9 + 8}{30} = \frac{17}{30}$

2	10 , 15
3	5 , 15
5	5 , 5
	1 , 1

2 x 3 x 5 = 30

③ $\frac{3}{7} + \frac{6}{7} + \frac{2}{3}$

$= \frac{9 + 18 + 14}{21} = \frac{41}{21}$

$= 1\frac{20}{21}$

3	3 , 7, 7
7	1 , 7, 7
	1 , 1 , 1

3 x 7 = 21

$21\overline{)41}\ 1$

$-\ 21$

20

④ $\frac{5}{12} + \frac{3}{4} + \frac{2}{3}$

$= \frac{5 + 9 + 8}{12} = \frac{22}{12}$

$= \frac{11}{6} = 1\frac{5}{6}$

2	12 , 4, 3
2	6 , 2, 3
3	3, 1, 3
	1 , 1 , 1

2 x 2 x 3 = 12

$6\overline{)11}\ 1$

$-\ 6$

5

B Solve the followings. مندرجہ ذیل کو حل کریں۔

① $\frac{2}{3} - \frac{1}{6}$

$= \frac{12 - 3}{18}$

$= \frac{9}{18} = \frac{1}{2}$

② $7 - \frac{1}{4}$

$= \frac{7}{1} - \frac{1}{4} = \frac{28 - 1}{4}$

$= \frac{27}{4} = 6\frac{3}{4}$

$4\overline{)27}\ 6$

$-\ 24$

3

③ $6\frac{2}{3} - 3\frac{5}{11}$

$= \frac{20}{3} - \frac{38}{11}$

$= \frac{220 - 114}{33}$

$= \frac{106}{33} = 3\frac{7}{33}$

$33\overline{)106}\ 3$

$-\ 99$

7

④ $9\frac{3}{8} - 8$

$= \frac{75}{8} - \frac{8}{1}$

$= \frac{75 - 64}{8}$

$= \frac{11}{8} = 1\frac{3}{8}$

$8\overline{)11}\ 1$

$-\ 8$

3

⑤ $2\frac{3}{4} + 5\frac{1}{6} - 2\frac{4}{9}$

$= \frac{11}{4} + \frac{31}{6} - \frac{22}{9}$

$= \frac{99 + 186 - 88}{36}$

$= \frac{285 - 88}{36} = \frac{197}{36} = 5\frac{17}{36}$

2	4 , 6, 9
2	2 , 3, 9
3	1 , 3 , 9
3	1 , 1 , 3
	1 , 1 , 1

2 x 2 x 3 x 3 = 36

$36\overline{)197}\ 5$

$-\ 180$

17

6 $4\frac{9}{10} + 3 - 3\frac{1}{2}$

$= \frac{49}{10} + \frac{3}{1} - \frac{7}{2}$

$= \frac{49 + 30 - 35}{10}$

$= \frac{79 - 35}{10} = \frac{44}{10} = \frac{22}{5} = 4\frac{2}{5}$

$$\begin{array}{r} 4 \\ 5\,\overline{)\,22} \\ -\,20 \\ \hline 2 \end{array}$$

7 $6\frac{2}{7} + 4\frac{1}{3} - 1\frac{5}{21}$

$= \frac{44}{7} + \frac{13}{3} - \frac{26}{21}$

$= \frac{132 + 91 - 26}{21}$

$= \frac{223 - 26}{21} = \frac{197}{21} = 9\frac{8}{21}$

$$\begin{array}{r} 9 \\ 21\,\overline{)\,197} \\ -\,189 \\ \hline 8 \end{array}$$

8 $7\frac{9}{10} + 4\frac{1}{3} + 2\frac{17}{39}$

$= \frac{79}{10} + \frac{13}{3} + \frac{95}{39}$

$= \frac{3081 + 1690 + 950}{390}$

$= \frac{5721}{390} = \frac{1907}{130} = 14\frac{87}{130}$

2	10 , 3, 39
3	5 , 3 , 39
5	5, 1, 13
13	1 , 1 , 13
	1 , 1 , 1

2 x 3 x 5 x 13
= 390

$$\begin{array}{r} 14 \\ 130\,\overline{)\,1907} \\ -\,130 \\ \hline 607 \\ 520 \\ \hline 87 \end{array}$$

EXERCISE مشق 5.3 Word Problems عبارتی سوالات

1. Khalid travels $2\frac{1}{2}$ kilometres by bus and then he travels $7\frac{5}{6}$ kilometres by a car. How many kilometres does he travels altogether?

خالد $2\frac{1}{2}$ کلومیٹر کا سفر بس کے ذریعے طے کرتا ہے اور $7\frac{5}{6}$ کلومیٹر کار کے ذریعے طے کرتا ہے۔ وہ کل کتنا فاصلہ طے کرتا ہے۔

Solution: $2\frac{1}{2} + 7\frac{5}{6}$

$$\frac{5}{2} + \frac{47}{6}$$

$$= \frac{15 + 47}{6} = \frac{62}{6}$$

$$= \frac{\cancel{62}^{31}}{\cancel{6}_{3}} = \frac{31}{3}$$

$$= 10\frac{1}{3}$$

$$3\overline{)31}\ 10,\ 30,\ 1$$

2. I have $3\frac{1}{2}$ metres of string. I cut off $\frac{1}{5}$ meters to tie on a label. How many meters of string is left with me?

میرے پاس $3\frac{1}{2}$ میٹر لمبی رسی ہے۔ اگر اس میں سے $\frac{1}{5}$ میٹر رسی کاٹ کر لیبل پر لپیٹتا ہوں تو باقی کتنی لمبی رسی بچی؟

Solution: $3\frac{1}{2} - \frac{1}{5}$

$$\frac{7}{2} - \frac{1}{5}$$

$$= \frac{35 - 2}{10} = \frac{33}{10}$$

$$= 3\frac{3}{10}$$

$$10\overline{)33}\ 3,\ 30,\ 3$$

3. $\frac{1}{8}$ of the picture is red. $\frac{5}{6}$ of the picture is yellow. The rest is not coloured. What part of the pictures is not coloured?

ایک تصویر کا $\frac{1}{8}$ حصہ سرخ ہے۔ $\frac{5}{6}$ حصہ پیلا ہے اور باقی بے رنگ ہے۔ کتنا حصہ بے رنگ ہے؟

Solution: $\frac{1}{8} + \frac{5}{6}$

$$= \frac{3 + 20}{24} = \frac{23}{24}$$

Un coloured $= \frac{1}{1} - \frac{23}{24}$

$$= \frac{24 - 23}{24} = \frac{1}{24}$$

4. Tahir purchased $3\frac{1}{2}$ kg of potatoes. $1\frac{3}{4}$ kg of onion and $\frac{1}{2}$ kg of tomatoes. How many kg of vegetable did he buy in all?

طاہر نے $3\frac{1}{2}$ کلو گرام آلو، $1\frac{3}{4}$ کلو گرام پیاز اور $\frac{1}{2}$ کلو گرام ٹماٹر خریدے۔ اس نے کل کتنے کلو گرام سبزی خریدی؟

Solution: $3\frac{1}{2} + 1\frac{3}{4} + \frac{1}{2}$

$$= \frac{7}{2} + \frac{7}{4} + \frac{1}{2}$$

$$= \frac{14 + 7 + 2}{4} = \frac{23}{4}$$

$$= 5\frac{3}{4}$$

$$\begin{array}{r} 5 \\ 4\,\overline{)\,23} \\ -\,20 \\ \hline 3 \end{array}$$

5. The sum of two numbers is $3\frac{4}{5}$ and one of them is $2\frac{1}{2}$.
What is the other number?

دو اعداد کا مجموعہ $3\frac{4}{5}$ ہے۔ اس میں سے ایک عدد $2\frac{1}{2}$ ہے دوسرا عدد کیا ہوگا؟

Solution: $3\frac{4}{5} - 2\frac{1}{2}$

$$\frac{19}{5} - \frac{5}{2}$$

$$= \frac{38 - 25}{10} = \frac{13}{10}$$

$$= 1\frac{3}{10}$$

$$10\overline{)13}\ 1,\ -10,\ 3$$

6. I have $8\frac{1}{2}$ dozens of oranges. I buy $8\frac{1}{4}$ dozens more. Then I give $6\frac{1}{3}$ oranges to my neighbour. How many dozens of oranges are left?

میرے پاس $8\frac{1}{2}$ سنگترے ہیں۔ میں نے $8\frac{1}{4}$ درجن اور خرید لیے۔ پھر ان میں سے میں نے $6\frac{1}{3}$ درجن سنگترے اپنے ہمسایہ کو دے دیے۔ اب میرے پاس کتنے سنگترے باقی بچے؟

Solution: $8\frac{1}{2} + 8\frac{1}{4} - 6\frac{1}{3}$

$$= \frac{17}{2} + \frac{33}{4} - \frac{19}{3}$$

$$= \frac{102 + 99 - 76}{12}$$

$$= \frac{201 - 76}{12} = \frac{125}{12}$$

$$= 10\frac{5}{12}$$

$$12\overline{)125}\ 10,\ -120,\ 5$$

EXERCISE مشق 5.4

A Find the product, giving all answer in their lowest terms.

حاصل ضرب معلوم کریں اور مختصر ترین شکل میں لکھیں۔

① $\frac{5}{8} \times 9$

Solution:

$= \frac{5}{8} \times \frac{9}{1}$

$= \frac{5 \times 9}{8 \times 1}$

$= \frac{45}{8} = 5\frac{5}{8}$

$8\overline{)45}$ → 5, -40, 5

② $15 \times \frac{8}{25}$

Solution:

$= \frac{\cancel{15}^{3}}{1} \times \frac{8}{\cancel{25}_{5}}$

$= \frac{3 \times 8}{1 \times 5}$

$= \frac{24}{5} = 4\frac{4}{5}$

$5\overline{)24}$ → 4, -20, 4

③ $\frac{9}{23} \times 46$

Solution:

$= \frac{9}{\cancel{23}_{1}} \times \frac{\cancel{46}^{2}}{1}$

$= \frac{9 \times 2}{1 \times 1}$

$= \frac{18}{1} = 18$

④ $18 \times \frac{5}{48}$

Solution:

$= \frac{\cancel{18}^{3}}{1} \times \frac{5}{\cancel{48}_{8}}$

$= \frac{3 \times 5}{1 \times 8}$

$= \frac{15}{8} = 1\frac{7}{8}$

$8\overline{)15}$ → 1, -8, 7

⑤ $\frac{5}{7} \times \frac{6}{11}$

Solution:

$= \frac{5 \times 6}{7 \times 11}$

$= \frac{30}{77}$

⑥ $\frac{8}{15} \times \frac{5}{48}$

Solution:

$= \frac{\cancel{8}^{1}}{\cancel{15}_{3}} \times \frac{\cancel{5}^{1}}{\cancel{48}_{6}}$

$= \frac{1 \times 1}{3 \times 6}$

$= \frac{1}{18}$

⑦ $\frac{27}{40} \times \frac{5}{9}$

Solution:

$= \frac{\cancel{27}^{3}}{\cancel{40}_{8}} \times \frac{\cancel{5}^{1}}{\cancel{9}_{1}}$

$= \frac{3 \times 1}{8 \times 1}$

$= \frac{3}{8}$

⑧ $\frac{4}{9} \times \frac{5}{6}$

Solution:

$= \frac{\cancel{4}^{2}}{9} \times \frac{5}{\cancel{6}_{3}}$

$= \frac{2 \times 5}{9 \times 3}$

$= \frac{10}{27}$

⑨ $3\frac{5}{8} \times 5\frac{5}{8}$

Solution:

$= \frac{29}{8} \times \frac{45}{8}$

$= \frac{29 \times 45}{8 \times 8}$

$= \frac{1305}{64} = 20\frac{25}{65}$

$64\overline{)1305}\ 20$, -1280, 25

⑩ $33\frac{1}{3} \times \frac{21}{40}$

Solution:

$= \frac{\cancel{100}^{5}}{\cancel{3}_{1}} \times \frac{\cancel{21}^{7}}{\cancel{40}_{2}}$

$= \frac{5 \times 7}{1 \times 2}$

$= \frac{35}{2} = 17\frac{1}{2}$

$2\overline{)35}\ 17$, -34, 1

⑪ $5\frac{5}{6} \times 8\frac{9}{11}$

Solution:

$= \frac{35}{6} \times \frac{97}{11}$

$= \frac{35 \times 97}{6 \times 11}$

$= \frac{3395}{66} = 51\frac{29}{66}$

$66\overline{)3395}\ 51$, -330, 95, -66, 29

⑫ $3\frac{3}{4} \times 5\frac{1}{4}$

Solution:

$= \frac{15}{4} \times \frac{21}{4}$

$= \frac{15 \times 21}{4 \times 4}$

$= \frac{315}{16} = 19\frac{11}{16}$

$16\overline{)315}\ 19$, -16, 155, -144, 11

(13) $7\frac{7}{10} \times 9\frac{1}{11}$

Solution:

$$= \frac{\cancel{77}^{7}}{\cancel{10}_{1}} \times \frac{\cancel{100}^{10}}{\cancel{11}_{1}}$$

$$= \frac{7 \times 10}{1 \times 1}$$

$$= \frac{70}{1} = 70$$

(B) Word Problems: عبارتی سوالات

1. Ahmed walks $3\frac{1}{2}$ km in one hour. How much he will walk in 3 hours?

احمد $3\frac{1}{2}$ کلومیٹر ایک گھنٹہ میں پیدل چلتا ہے۔ وہ 3 گھنٹے میں کتنے کلومیٹر پیدل چلے گا۔

Solution:

$$3\frac{1}{2} \times 3$$

$$= \frac{7}{2} \times \frac{3}{1}$$

$$= \frac{7 \times 3}{2 \times 1}$$

$$= \frac{21}{2} = 10\frac{1}{2}$$

$$2\overline{)21}\ 10,\ -20,\ 1$$

2. A car covers a distance of $79\frac{1}{2}$ km is one hour. How much distance will be covered in $4\frac{3}{5}$ hours?

ایک کار $79\frac{1}{2}$ کلومیٹر کا فاصلہ ایک گھنٹے میں طے کرتی ہے۔ وہ $4\frac{3}{5}$ گھنٹوں میں کتنا فاصلہ طے کرے گا۔

Solution:

$$79\frac{1}{2} \times 4\frac{3}{5}$$

$$= \frac{159}{2} \times \frac{23}{5}$$

$$= \frac{159 \times 23}{2 \times 5}$$

$$= \frac{3657}{10} = 365\frac{7}{10}$$

$$\begin{array}{r} 365 \\ 10\,\overline{)\,3657} \\ -\,360 \\ \hline 57 \\ 50 \\ \hline 7 \end{array}$$

3. Saliha has $12\frac{1}{2}$ litres of milk. She gave $\frac{1}{8}$ of litre to her sister. How much litres of milk is left with her?

صالحہ کے پاس $12\frac{1}{2}$ لٹر دودھ ہے۔ وہ $\frac{1}{8}$ حصہ اپنی بہن کو دے دیتی ہے۔ اس کے پاس کتنے لٹر دودھ بچ گیا ہے؟

Solution: $12\frac{1}{2} \times \frac{1}{8}$

$$= \frac{25}{2} \times \frac{1}{8}$$

$$= \frac{25 \times 1}{2 \times 8}$$

$$= \frac{25}{16} = 1\frac{9}{16}$$

$$\begin{array}{r} 1 \\ 16\,\overline{)\,25} \\ -\,16 \\ \hline 9 \end{array}$$

4. In a class of 36 pupils, $\frac{1}{2}$ are girls. How many girls are altogether?

36 شاگردوں کی ایک جماعت میں $\frac{1}{2}$ حصہ لڑکیاں ہیں۔ کل لڑکیوں کی تعداد کیا ہے؟

Solution: $36 \times \frac{1}{2}$

$$= \frac{36}{1} \times \frac{1}{2}$$

$$= \frac{36}{2}$$

$$= 18$$

5. Arshad buys $5\frac{2}{5}$ metres of cable. He used $\frac{3}{10}$ of it. What length of cable has he used?

ارشد $5\frac{2}{5}$ میٹر لمبی تار خریدتا ہے۔ وہ اس کا $\frac{3}{10}$ حصہ استعمال کر لیتا ہے۔ اس نے کتنی لمبی تار استعمال کی ہے؟

Solution:

$$5\frac{2}{5} \times \frac{3}{10}$$

$$= \frac{27}{5} \times \frac{3}{10}$$

$$= \frac{27 \times 3}{5 \times 10}$$

$$= \frac{81}{50} = 1\frac{31}{50}$$

$$\begin{array}{r} 1 \\ 50\overline{)81} \\ \underline{-\,50} \\ 31 \end{array}$$

EXERCISE مشق 5.6

A Simplify the following, giving your answer in their lowest terms.

مندرجہ ذیل کو مختصر کریں اور اپنے جوابات مختصر ترین شکل میں لکھیں۔

(1) $\frac{6}{13}$ ، 12

Solution:

$$= \frac{6}{13} \div \frac{12}{1}$$

$$= \frac{6}{13} \times \frac{1}{12}$$

$$= \frac{\overset{1}{\cancel{6}}}{13} \times \frac{1}{\cancel{12}_{2}}$$

$$= \frac{1 \times 1}{13 \times 2} = \frac{1}{26}$$

(2) 15 ، $8\frac{1}{3}$

Solution:

$$= \frac{15}{1} \div \frac{25}{3}$$

$$= \frac{15}{1} \times \frac{3}{25}$$

$$= \frac{\overset{3}{\cancel{15}}}{1} \times \frac{3}{\cancel{25}_{5}}$$

$$= \frac{3 \times 3}{1 \times 5} = \frac{9}{5} = 1\frac{4}{5}$$

$$\begin{array}{r} 1 \\ 5\overline{)9} \\ \underline{-\,5} \\ 4 \end{array}$$

③ $8\frac{3}{4}$ ، 7

Solution:

$= \frac{35}{4} \div \frac{7}{1}$

$= \frac{35}{4} \times \frac{1}{7}$

$= \frac{\cancel{35}^{5}}{4} \times \frac{1}{\cancel{7}_{1}}$

$= \frac{5 \times 1}{4 \times 1} = \frac{5}{4} = 1\frac{1}{4}$

$4\overline{)5}$ → 1, -4, 1

④ $18\frac{1}{5}$ ، $1\frac{4}{9}$

Solution:

$= \frac{91}{5} \div \frac{13}{3}$

$= \frac{91}{5} \times \frac{3}{13}$

$= \frac{\cancel{91}^{7}}{5} \times \frac{3}{\cancel{13}_{1}}$

$= \frac{7 \times 3}{5 \times 1} = \frac{21}{5} = 4\frac{1}{5}$

$5\overline{)21}$ → 4, -20, 1

⑤ $4\frac{4}{5}$ ، $2\frac{2}{7}$

Solution:

$= \frac{24}{5} \div \frac{16}{7}$

$= \frac{24}{5} \times \frac{7}{16}$

$= \frac{\cancel{24}^{3}}{5} \times \frac{7}{\cancel{16}_{2}}$

$= \frac{3 \times 7}{5 \times 2} = \frac{21}{10} = 2\frac{1}{10}$

$10\overline{)21}$ → 2, -20, 1

⑥ $1\frac{1}{8}$ ، $6\frac{3}{4}$

Solution:

$= \frac{9}{8} \div \frac{27}{4}$

$= \frac{9}{8} \times \frac{4}{27}$

$= \frac{\cancel{9}^{1}}{\cancel{8}_{2}} \times \frac{\cancel{4}^{1}}{\cancel{27}_{3}}$

$= \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$

⑦ $1\frac{3}{7} \div \frac{21}{20}$

Solution:

$= \frac{10}{7} \div \frac{21}{20}$

$= \frac{10}{7} \times \frac{20}{21}$

$= \frac{10 \times 20}{7 \times 21}$

$= \frac{200}{147} = 1\frac{53}{147}$

$147\overline{)200}\ 1$, -147, 53

⑧ $3\frac{3}{2} \div \frac{22}{9}$

Solution:

$= \frac{9}{2} \div \frac{22}{9}$

$= \frac{9}{2} \times \frac{9}{22}$

$= \frac{9 \times 9}{2 \times 22}$

$= \frac{81}{44} = 1\frac{37}{44}$

$44\overline{)81}\ 1$, -44, 37

⑨ $1\frac{1}{4} \div \frac{15}{16}$

Solution:

$= \frac{5}{4} \div \frac{15}{16}$

$= \frac{5}{4} \times \frac{16}{15}$

$= \frac{\cancel{5}^{1}}{\cancel{4}_{1}} \times \frac{\cancel{16}^{4}}{\cancel{15}_{3}}$

$= \frac{1 \times 4}{1 \times 3} = \frac{4}{3} = 1\frac{1}{3}$

$3\overline{)4}\ 1$, -3, 1

B Write the reciprocal of the following.

مندرجہ ذیل کے الٹ لکھیں۔

① 5 as $\frac{1}{5}$

② 7 as $\frac{1}{7}$

③ 3 as $\frac{1}{3}$

④ $\frac{1}{5}$ as $\frac{5}{1}$

⑤ 9 as $\frac{1}{9}$

⑥ $\frac{2}{3}$ as $\frac{3}{2}$

⑦ $\frac{4}{7}$ as $\frac{7}{4}$

⑧ $\frac{16}{17}$ as $\frac{17}{16}$

⑨ $\frac{88}{13}$ as $\frac{13}{88}$

Unit 6

Decimal Fractions

کسور اعشاریہ

EXERCISE مشق 6.1

A Express the following in the decimal form.

مندرجہ ذیل کو اعشاریہ شکل میں لکھیں۔

(1) $\frac{8}{10} + \frac{6}{100}$

Solution:

$= \frac{8}{10} + \frac{6}{100}$

$= 0.8 + 0.06 = 0.86$

(2) $\frac{5}{10} + \frac{9}{100}$

Solution:

$= \frac{8}{10} + \frac{9}{100}$

$= 0.5 + 0.09 = 0.59$

(3) $\frac{7}{100} + \frac{1}{1000}$

Solution:

$= \frac{7}{100} + \frac{1}{1000}$

$= 0.07 + 0.001 = 0.071$

(4) $\frac{3}{100} + \frac{7}{1000}$

Solution:

$= \frac{3}{100} + \frac{7}{1000}$

$= 0.03 + 0.007 = 0.037$

(5) $\frac{3}{10} + \frac{4}{100} + \frac{5}{1000}$

Solution:

$= \frac{3}{10} + \frac{4}{100} + \frac{5}{1000}$

$= 0.3 + 0.04 + 0.005 = 0.345$

(6) $\frac{1}{10} + \frac{6}{100} + \frac{9}{1000}$

Solution:

$= \frac{1}{10} + \frac{6}{100} + \frac{9}{1000}$

$= 0.1 + 0.06 + 0.009 = 0.169$

⑦ $3 + \frac{2}{10} + \frac{7}{100} + \frac{7}{1000}$

Solution:

$= 3 + \frac{2}{10} + \frac{7}{100} + \frac{7}{1000}$

$= 3 + 0.2 + 0.07 + 0.007 = 3.277$

⑧ $200 + 60 + \frac{2}{10} + \frac{9}{100} + \frac{5}{1000}$

Solution:

$= 200 + 60 + \frac{2}{10} + \frac{9}{100} + \frac{5}{1000}$

$= 200 + 60 + 0.2 + 0.09 + 0.005$

$= 260.295$

B Express as a common fraction.

کسر عام میں لکھیں۔

① 0.25

Solution:

$0.25 = \frac{\cancel{25}^{1}}{\cancel{100}_{4}} = \frac{1}{4}$

② 0.175

Solution:

$0.175 = \frac{\cancel{175}^{7}}{\cancel{1000}_{40}} = \frac{7}{40}$

③ 0.015

$0.015 = \frac{\cancel{15}^{3}}{\cancel{1000}_{200}} = \frac{3}{200}$

④ 0.005

$0.005 = \frac{\cancel{5}^{1}}{\cancel{1000}_{200}} = \frac{1}{200}$

C Write the value of the ringed digits.

دائرے لگے ہندسوں کی مقامی قیمت لکھیں۔

① 8 . 0 4⑤

5 Thousandths

② 9⑦. 3 2

7 Unites

③ 9 3 3 . 4 6⑤

5 Thousandths

④ 0 .⑦9 1

7 Tenths

D Express in the expanded form. مندرجہ ذیل کو پھیلی شکل میں لکھیں۔

1. 345.213 = 300 + 40 + 5 + 0.2 + 0.01 + 0.003
2. 612.147 = 600 + 10 + 2 + 0.1 + 0.04 + 0.007
3. 89.638 = 80 + 9 + 0.6 + 0.03 + 0.008
4. 71.276 = 70 + 1 + 0.2 + 0.07 + 0.006

EXERCISE مشق 6.2

A Solve the following sums. سوالات حل کریں۔

1.
$$\begin{array}{r} 876.325 \\ +\ 972.687 \\ \hline 1849.012 \end{array}$$

2.
$$\begin{array}{r} 569.804 \\ +\ 653.297 \\ \hline 1223.101 \end{array}$$

3.
$$\begin{array}{r} 788.967 \\ +\ 543.343 \\ \hline 1332.310 \end{array}$$

4.
$$\begin{array}{r} 7842.563 \\ 8497.782 \\ +\ 5609.145 \\ \hline 21949.490 \end{array}$$

5.
$$\begin{array}{r} 5.6971 \\ 78.8254 \\ +\ 854.7625 \\ \hline 939.2850 \end{array}$$

6.
$$\begin{array}{r} 65.7949 \\ 9.6256 \\ +\ 418.3699 \\ \hline 493.7904 \end{array}$$

7. Add : 57.632 and 85.96 جمع کریں۔

$$\begin{array}{r} 57.632 \\ +\ 85.96 \\ \hline 143.592 \end{array}$$

8. Add : 362.59, 2.79, 76.742 and 97.8564 جمع کریں۔

$$\begin{array}{r} 362.59 \\ 2.79 \\ +\ 76.742 \\ 97.8564 \\ \hline 539.9784 \end{array}$$

B Find the difference. فرق معلوم کریں۔

(1)
$$\begin{array}{r} 804.256 \\ -\ 725.897 \\ \hline 78.359 \end{array}$$

(2)
$$\begin{array}{r} 985.764 \\ -\ 397.876 \\ \hline 587.888 \end{array}$$

(3)
$$\begin{array}{r} 125.007 \\ -\ 87.832 \\ \hline 37.175 \end{array}$$

(4)
$$\begin{array}{r} 400.972 \\ -\ 321.785 \\ \hline 79.187 \end{array}$$

(5)
$$\begin{array}{r} 563.854 \\ -\ 297.742 \\ \hline 266.112 \end{array}$$

(6)
$$\begin{array}{r} 429.596 \\ -\ 385.787 \\ \hline 43.809 \end{array}$$

(7) Subtract : 832.742 from 920.76 تفریق کریں۔

$$\begin{array}{r} 920.760 \\ -\ 832.742 \\ \hline 88.018 \end{array}$$

(8) Subtract : 106.7289 from 637.4 تفریق کریں۔

$$\begin{array}{r} 637.4000 \\ -\ 106.7289 \\ \hline 530.6711 \end{array}$$

(9) Subtract : 763.745 from 876.92 تفریق کریں۔

$$\begin{array}{r} 876.920 \\ -\ 763.745 \\ \hline 113.175 \end{array}$$

EXERCISE مشق 6.3

A Multiply. ضرب دیں۔

(1) 0.8 x 14

$= \frac{8}{10} \times 14$

$= \frac{8 \times 14}{10}$

$= \frac{112}{10} = 11.2$

(2) 0.257 x 18

$= \frac{257}{1000} \times 18$

$= \frac{257 \times 18}{1000}$

$= \frac{4626}{1000} = 4.626$

(3) 0.512 x 23

$= \frac{512}{1000} \times 23$

$= \frac{512 \times 23}{1000}$

$= \frac{11776}{1000} = 11.776$

(4) 2.56 x 7

$= \frac{2.56}{100} \times 7$

$= \frac{256 \times 7}{100}$

$= \frac{1792}{100} = 17.92$

(5) 8.97 x 7.6

$= \frac{897}{100} \times \frac{76}{10}$

$= \frac{897 \times 76}{100 \times 10}$

$= \frac{68172}{1000} = 68.172$

(6) 78.21 x 12

$= \frac{7821}{100} \times 12$

$= \frac{7821 \times 12}{100}$

$= \frac{93852}{100} = 938.52$

(7) 98.29 x 5.4

$= \frac{9829}{100} \times \frac{54}{10}$

$= \frac{9829 \times 54}{100 \times 10}$

$= \frac{530766}{1000} = 530.766$

(8) 47.04 x 9.6

$= \frac{4704}{100} \times \frac{96}{10}$

$= \frac{4704 \times 96}{100 \times 10}$

$= \frac{451584}{1000} = 451.584$

⑨ 624.98 x 25.6

$= \frac{62498}{100} \times \frac{256}{10}$

$= \frac{62498 \times 256}{100 \times 10}$

$= \frac{15999488}{1000} = 15999.488$

⑩ 976.49 x 76.4

$= \frac{97649}{100} \times \frac{764}{10}$

$= \frac{97649 \times 764}{100 \times 10}$

$= \frac{74603836}{1000} = 74603.836$

⑪ 156.23 x 63.29

$= \frac{15623}{100} \times \frac{6329}{100}$

$= \frac{15623 \times 6329}{100 \times 100}$

$= \frac{98877967}{10000} = 9887.7967$

⑫ 900.77 x 22.97

$= \frac{90077}{100} \times \frac{2297}{100}$

$= \frac{90077 \times 2297}{100 \times 100}$

$= \frac{206906869}{10000} = 20690.6869$

⑬ 838.87 x 74.19

$= \frac{83887}{100} \times \frac{7419}{100}$

$= \frac{83887 \times 7419}{100 \times 100}$

$= \frac{622357653}{10000} = 62235.7653$

⑭ 841.37 x 80.76

$= \frac{84137}{100} \times \frac{8076}{100}$

$= \frac{84137 \times 8076}{100 \times 100}$

$= \frac{679490412}{10000} = 67949.0412$

⑮ 763.47 x 100

$= \frac{76347}{100} \times 100$

$= \frac{76347 \times \cancel{100}}{\cancel{100}}$

$= 76347$

⑯ 450.02 x 100

$= \frac{45002}{100} \times 100$

$= \frac{45002 \times \cancel{100}}{\cancel{100}}$

$= 45002$

(17) 3.974 x 1000

$= \frac{3974}{1000} \times 1000$

$= \frac{3974 \times \cancel{1000}}{\cancel{1000}}$

$= 3974$

(18) 0.7964 x 1000

$= \frac{7964}{10000} \times 1000$

$= \frac{7964 \times \cancel{100}}{\cancel{10000}}$

$= \frac{7964}{100} = 79.64$

(19) 83.5 x 7.8

$= \frac{835}{10} \times \frac{78}{10}$

$= \frac{835 \times 78}{10 \times 10}$

$= \frac{65130}{100} = 651.3$

(20) 19 x 9.79

$= 19 \times \frac{9.79}{100}$

$= \frac{19 \times 979}{100}$

$= \frac{18601}{100} = 186.01$

EXERCISE مشق 6.4

(A) Find the value of the following.

مندرجہ ذیل کی قیمتیں معلوم کریں۔

(1) 2.25 ، 0.15

$= \frac{225}{100}$ ، $\frac{15}{100}$

$= \frac{\overset{15}{\cancel{225}}}{\cancel{100}} \times \frac{\cancel{100}}{\cancel{15}} = 15$

(2) 1.728 ، 0.1444

$= \frac{1728}{1000}$ ، $\frac{1444}{10000}$

$= \frac{1728}{\cancel{1000}} \times \frac{\cancel{10000}}{1444} = \frac{17280}{1444}$

$= 11.96$

(3) 8.56 ، 0.8

$= \frac{856}{100}$ ، $\frac{8}{10}$

$= \frac{\overset{107}{\cancel{856}}}{\cancel{100}} \times \frac{\cancel{10}}{\cancel{8}} = \frac{107}{10} = 10.7$

(4) 25.44 ، 0.004

$= \frac{2544}{100}$ ، $\frac{4}{1000}$

$= \frac{2544}{\cancel{100}} \times \frac{\cancel{1000}}{4} = \frac{25440}{4}$

$= 6360$

⑤ 87.6 ، 100

$= \frac{876}{10} \text{ ، } \frac{100}{1}$

$= \frac{876}{10} \times \frac{1}{100} = \frac{876}{1000} = 0.876$

⑥ 2.55 ، 2.3

$= \frac{255}{100} \text{ ، } \frac{23}{10}$

$= \frac{255}{\cancel{100}} \times \frac{\cancel{10}}{23} = \frac{255}{230}$

$= 1.10$

⑦ 25.14 ، 0.32

$= \frac{2514}{100} \text{ ، } \frac{32}{100}$

$= \frac{2514}{\cancel{100}} \times \frac{\cancel{100}}{32} = \frac{2514}{32}$

$= 78.56$

⑧ 0.575 ، 2.3

$= \frac{575}{1000} \text{ ، } \frac{23}{10}$

$= \frac{575}{\cancel{1000}} \times \frac{\cancel{10}}{23} = \frac{575}{2300}$

$= 0.25$

⑨ 0.0828 ، 0.36

$= \frac{828}{10000} \text{ ، } \frac{36}{100}$

$= \frac{828}{\cancel{10000}} \times \frac{\cancel{100}}{36} = \frac{828}{3600}$

$= 0.23$

⑩ 51.714 ، 15.21

$= \frac{51714}{1000} \text{ ، } \frac{1521}{100}$

$= \frac{51714}{\cancel{1000}} \times \frac{\cancel{100}}{1521} = \frac{51714}{15210}$

$= 3.4$

⑪ 8.1521 ، 4.6

$= \frac{81521}{10000} \text{ ، } \frac{46}{10}$

$= \frac{81521}{\cancel{10000}} \times \frac{\cancel{10}}{46} = \frac{81521}{46000}$

$= 1.772$

⑫ 69.408 ، 38.15

$= \frac{69408}{1000} \text{ ، } \frac{3815}{100}$

$= \frac{69408}{\cancel{1000}} \times \frac{\cancel{100}}{3815} = \frac{69408}{38150}$

$= 1.81$

Unit 7

Average اوسط

EXERCISE مشق 7.1

1 Find the average. اوسط معلوم کریں۔

i. 97, 69, 75, 83

Solution:

Sum of the given numbers = 97 + 69 + 75 + 83 = 324

Number of terms = 4

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{\cancel{324}^{81}}{\cancel{4}} = 81$$

ii. 56, 92, 94, 81, 57

Solution:

Sum of the given numbers = 56 + 92 + 94 + 81 + 57 = 380

Number of terms = 5

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{\cancel{380}^{76}}{\cancel{5}} = 76$$

iii. 4.1, 41.6, 32.1, 28.7, 17.5

Solution:

Sum of the given numbers = 4.1 + 41.6 + 32.1 + 28.7 + 17.5 = 124

Number of terms = 5

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{\cancel{124}}{\cancel{5}} = 24.8$$

iv. 19.05, 40.25, 15.31, 20.27

Solution:

Sum of the given numbers = 19.05 + 40.25 + 15.31 + 20.27 = 94.88

Number of terms = 4

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{94.88}{4} = 23.72$$

v. Rs. 316, Rs. 1000. Rs. 627, Rs. 325

Solution:

Sum of the given numbers = 316 + 1000 + 627 + 325 = 2268 Rs.

Number of terms = 4

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{2268}{4} = 567 \text{ Rs.}$$

vi. 28, 44, 31, 53, 16, 34, 18

Solution:

Sum of the given numbers = 28 + 44 + 31 + 53 + 16 + 34 + 18 = 224

Number of terms = 7

$$\text{Average} = \frac{\text{Sum of numbers}}{\text{Number of terms}}$$

$$= \frac{224}{7} = 32$$

2. The height of six students are 85 inches, 61 inches, 64 inches, 57 inches, 62 inches and 52 inches respectively. Find the average height.

چھ طالب علموں کے قد کی لمبائی 85 انچ، 61 انچ، 64 انچ، 57 انچ، 62 انچ اور 52 انچ ہے۔ قد کی اوسط لمبائی معلوم کریں۔

Solution:

Sum of the height of students = 85 + 61 + 64 + 57 + 62 + 52 = 381 inches

Number of students = 6

$$\text{Average} = \frac{\text{Sum of heights}}{\text{Number of students}}$$

$$= \frac{\cancel{381}}{\cancel{6}} = 63.5 \text{ inches}$$

3. A student obtained 75 marks in Mathematics, 68 marks in Science. 70 marks in English and 49 marks in Islamiyat. Calculate his average marks per subject?

ایک طالب علم ریاضی میں 75 سائنس میں 68، انگلش میں 70 اور اسلامیات میں 49 نمبر حاصل کرتا ہے۔ اس کا فی مضمون اوسط معلوم کریں۔

Solution:

Sum of the marks = 75 + 68 + 70 + 49 = 262 marks

Number of subjects = 4

$$\text{Average} = \frac{\text{Sum of marks}}{\text{Number of subjects}}$$

$$= \frac{\cancel{262}}{\cancel{4}} = 65.5 \text{ marks}$$

4. Ahmed scored 45 runs in first match, 71 runs in second, 121 runs in third, 98 runs in fourth and 110 runs in fifth match. Calculate his average runs per match?

احمد پہلے میچ میں 45 رنز، دوسرے میچ میں 71 رنز، تیسرے میچ میں 121 رنز، چوتھے میچ میں 98 رنز اور پانچویں میں 110 رنز بناتا ہے۔ اس کے رنز کی فی میچ اوسط معلوم کریں۔

Solution:

Sum of the scored runs = 45 + 71 + 121 + 98 + 110 = 445

Number of matches = 5

$$\text{Average} = \frac{\text{Sum of runs}}{\text{Number of matches}}$$

$$= \frac{\cancel{445}^{89}}{\cancel{5}} = 89$$

EXERCISE مشق 7.2

Word Problems عبارتی سوالات

1. Average earning of a worker is Rs. 129. Find the total earning of 9 workers?

ایک مزدور کی اوسط آمدن 129 روپے ہے۔ کل 9 مزدوروں کی آمدن معلوم کریں۔

Solution:

Sum of quantities = Average x Number of quantities

Earning of 9 workers = 129 x 9 = Rs. 1161

2. Average of 7 numbers is 69. Find the sum of number?

7 اعداد کا اوسط 69 ہے۔ اعداد کا مجموعہ معلوم کریں۔

Solution:

Sum of quantities = Average x Number of quantities

Sum of number = 69 x 7 = 483

3. Sum of quantities is 9408. The average of these quantities is 784. Find the number of quantities?

کچھ مقداروں کا مجموعہ 9408 ہے۔ ان مقداروں کا اوسط 784 ہے۔ ان مقداروں کی تعداد معلوم کریں۔

$$\text{Number of quantities} = \frac{\text{Sums of quantities}}{\text{Average}}$$

$$\text{Number of quantities} = \frac{9408}{784} = 12$$

$$\begin{array}{r} 12 \\ 784\overline{)\,9408} \\ -\,784 \\ \hline 1568 \\ -\,1568 \\ \hline 0 \end{array}$$

4. Average speed of a car is 65.3 km/h and the total distance covered is 130.6 km. Find the time taken by car to cover the whole distance?

ایک کار کی اوسط رفتار 65.3 کلومیٹر فی گھنٹا ہے اور یہ کل فاصلہ 130.6 کلومیٹر طے کرتی ہے۔ معلوم کریں کہ کار کل فاصلہ کتنے وقت میں طے کر لیتی ہے؟

$$\text{Number of quantities} = \frac{\text{Sums of quantities}}{\text{Average}}$$

$$\text{Time} = \frac{\text{Total Distance}}{\text{Average speed}}$$

$$\begin{array}{r} 2 \\ 65.3\,\overline{)\,130.6} \\ -\,130.6 \\ \hline 0 \end{array}$$

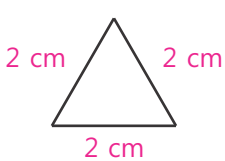
$$= \frac{130.6 \text{ km/h}}{65.3 \text{ km/h}} = 2 \text{ hour}$$

Unit 8

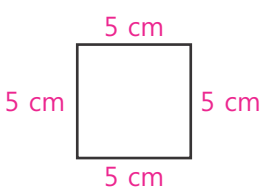
Perimeter احاطہ

Exercise مشق 8

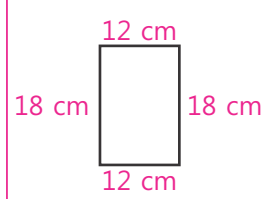
A Find the perimeter of each figure. ہر شکل کا محیط معلوم کریں۔



$$\begin{array}{r} 2 \\ 2 \\ +\ 2 \\ \hline 6 \text{ cm} \end{array}$$

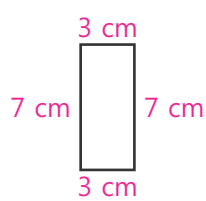


$$\begin{array}{r} 5 \\ 5 \\ 5 \\ +\ 5 \\ \hline 20 \text{ cm} \end{array}$$

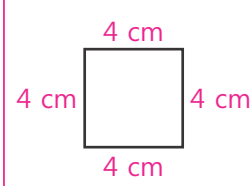


$$\begin{array}{r} 12 \\ +\ 18 \\ \hline 30 \\ \times\ \ 2 \\ \hline 60 \text{ cm} \end{array}$$

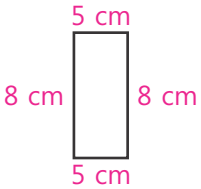
$$\begin{array}{r} 16 \\ +\ \ 6 \\ \hline 22 \\ \times\ \ 2 \\ \hline 44 \text{ cm} \end{array}$$



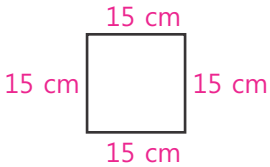
$$\begin{array}{r} 7 \\ +\ \ 3 \\ \hline 10 \\ \times\ \ 2 \\ \hline 20 \text{ cm} \end{array}$$



$$\begin{array}{r} 4 \\ 4 \\ 4 \\ +\ 4 \\ \hline 16 \text{ cm} \end{array}$$



$$\begin{array}{r} 8 \\ +\ 5 \\ \hline 13 \\ \times\ 2 \\ \hline 26 \text{ cm} \end{array}$$



$$\begin{array}{r} 15 \\ 15 \\ 15 \\ +\ 15 \\ \hline 60 \text{ cm} \end{array}$$

$$\begin{array}{r} 42 \\ +\ 82 \\ \hline 124 \\ \times\ 2 \\ \hline 248 \text{ cm} \end{array}$$

$$\begin{array}{r} 10 \\ +\ 15 \\ \hline 25 \\ \times\ 2 \\ \hline 50 \text{ cm} \end{array}$$

$$\begin{array}{r} 36 \\ +\ 16 \\ \hline 52 \\ \times\ 2 \\ \hline 104 \text{ cm} \end{array}$$

B Find the perimeter.

محیط معلوم کریں۔

1. l = 5 cm b = 4 cm
   5 + 4 = 9 x 2 = 18 cm

2. l = 6 cm b = 5 cm
   6 + 5 = 11 x 2 = 22 cm

3. l = 6 cm b = 2 cm
   6 + 2 = 8 x 2 = 16 cm

4. l = 9 cm b = 4 cm
   9 + 4 = 13 x 2 = 26 cm

C Fill the missing.

خالی جگہ پر کریں۔

Rectangle

Perimeter	l	b
18 cm	6 cm	3 cm
27 cm	9 cm	3 cm
32 cm	16 cm	2 cm
60 cm	5 cm	12 cm
400 cm	80 cm	5 cm

Unit 9

Measurement پیمائش

A Find the sum of the followings. مندرجہ ذیل کا مجموعہ معلوم کریں۔

1. 402 km 129 m and 53 km 152 m.

km	m
402	129
+ 53	152
455	281

2. 38 km 4m 6 dm and 5 km 4 m 9 dm.

km	m	dm
	①	
38	4	6
+ 5	4	9
43	9	5

3. 7 m 8 dm 7 cm and 13 m 3 dm 7 cm.

m	dm	cm
①	①	
7	8	7
+ 13	3	7
21	2	4

B Subtract the following. مندرجہ ذیل کو تفریق کریں۔

1. 4 m 5 cm from 9 m 7 cm.

m	cm
9	7
– 4	5
5	2

2. 125 km 73 m 5 cm from 682 km 83 m 7 cm.

km	m	cm
682	83	7
– 125	73	5
557	10	2

3. 32 km 84 m 7 dm from 65 km 4 m 6 dm.

km	m	dm
	1000	①
6 ~~5~~ (4)	~~4~~ (3)	6
– 32	84	7
32	919	9

C Find the sum of the followings. مندرجہ ذیل کا مجموعہ معلوم کریں۔

1. 18 kg 515 g and 83 kg 425 g.

kg	g
18	515
+ 83	425
101	940

2. 8 kg 132 g and 5 kg 967 g.

kg	g
① 8	132
+ 5	967
14	099

3. 397 kg 313 g and 416 kg 165 g.

kg	g
397	313
+ 416	165
813	478

D Find the sum of capacity of the followings. مندرجہ ذیل گنجائشوں کا مجموعہ معلوم کریں۔

1. 170 litres and 30 litres 200 milliliters

l	ml
170	-
+ 30	200
200	200

2. 27 decilitres and 160 millilitres

160 millitres = $\frac{160}{100}$ = 1.6 decilitres

27 + 1.6 = 28.6 decilitres

3. 38 litres and 100 decilitres.

100 decilitres = $\frac{100}{10}$ = 10 litres

38 + 10 = 48 litres

EXERCISE مشق 9.2

Words Problems عبارتی سوالات

1. Maya bought 36 m 42 cm of cloth. Hafsa bought 28 m 71 cm of cloth. How many metres of cloth did they both buy?

مایا نے 36 میٹر 42 سینٹی میٹر کپڑا خریدا۔ حفصہ نے 28 میٹر 71 سینٹی میٹر کپڑا خریدا۔ دونوں نے کل کتنے میٹر اور کتنے سینٹی میٹر کپڑا خریدا؟

	m	cm
	(1)	
	36	42
+	28	71
	65	13

2. A pole is 78m 9 cm long. If a length of 27 m 6 cm is cut off. What is the remaining length of the pole?

ایک کھمبا 78 میٹر 9 سینٹی میٹر لمبا ہے۔ اگر 28 میٹر 6 سینٹی میٹر اس میں سے کاٹ دیا جائے تو کھمبے کی باقی لمبائی کیا ہو گی؟

	m	cm
	78	9
−	27	6
	51	3

3. A bottle has 28 litre and 32 ml juice. Another bottle has 16 litre and 19 ml juice. Find the total litre and ml juice in both these bottles?

ایک بوتل میں 28 لٹر اور 32 ملی لٹر جوس ہے۔ دوسری بوتل میں 16 لٹر 19 ملی لٹر جوس ہے۔ دونوں بوتلوں میں کل کتنے لٹر اور ملی لٹر جوس ہے معلوم کریں۔

	l	ml
	28	32
+	16	19
	44	51

Unit 10

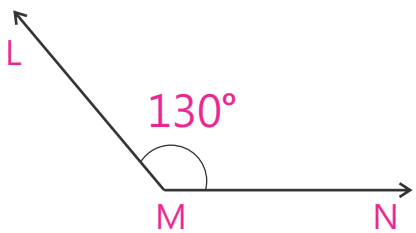
Geometry

جیومیٹری

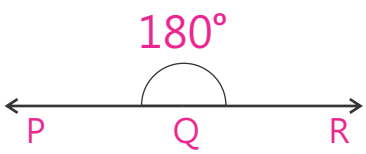
EXERCISE مشق 10.1

A Look at these angles and write their names.

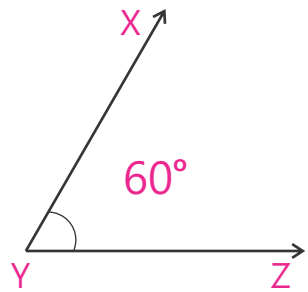
زاویوں کو دیکھیں اور ان کے نام لکھیں۔



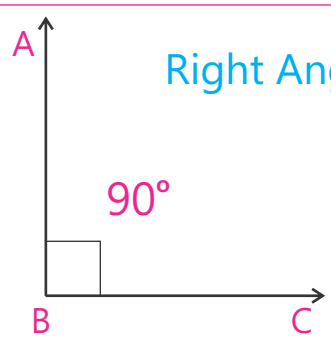
Obtuse Angle



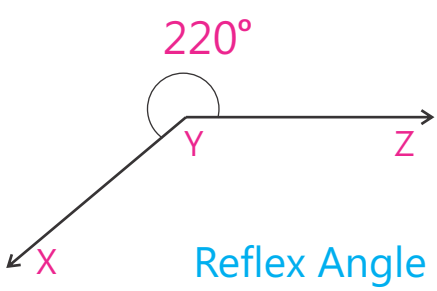
Straight Angle



Acute Angle



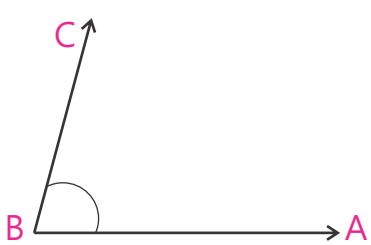
Right Angle



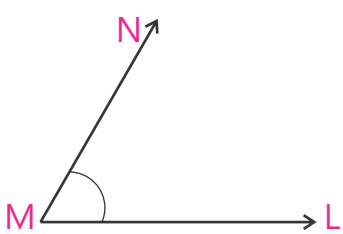
Reflex Angle

B Measure each angle with the help of protractor.

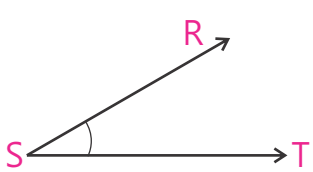
پروٹریکٹر کی مدد سے ہر زاویہ کی پیمائش کریں۔



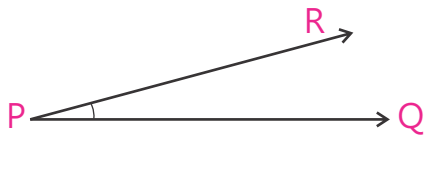
75°



60°

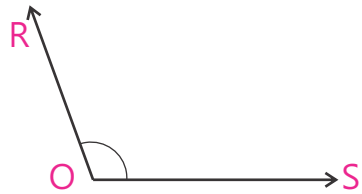


30°

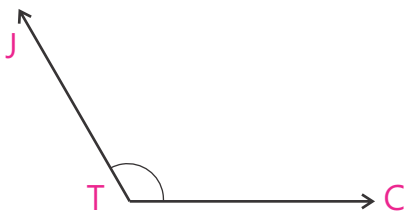


15°

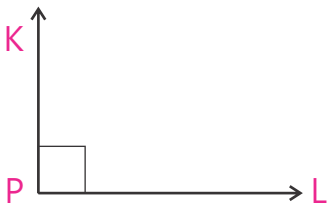
135°



110°



120°



90°

180°

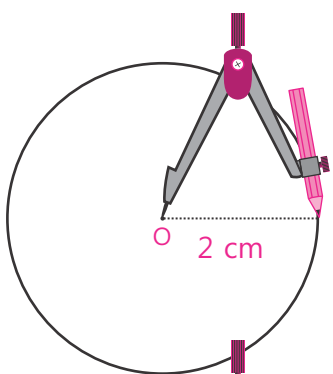
EXERCISE مشق 10.2

A Draw the circle of following Radius. مندرجہ ذیل رداس کے دائرے لگائیں۔

1. 2 cm

Steps of construction:

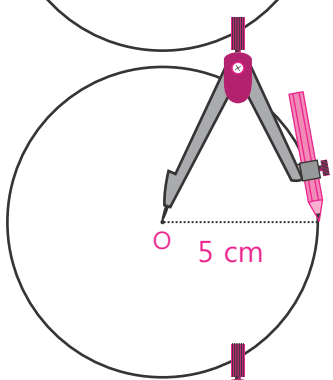
1. Take a point on the paper.
2. Open the compass 2 cm.
3. Taking point "O" as center draw the circle.



2. 5 cm

Steps of construction:

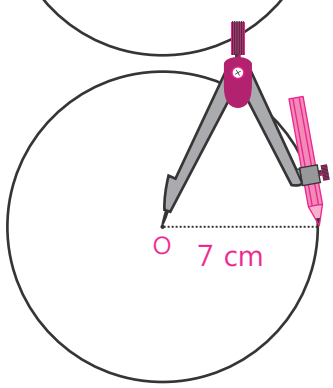
1. Take a point on the paper.
2. Open the compass 5 cm.
3. Taking point "O" as center draw the circle.



3. 7 cm

Steps of construction:

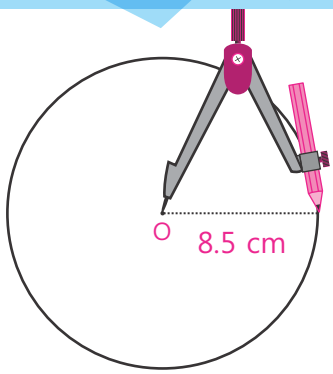
1. Take a point on the paper.
2. Open the compass 7 cm.
3. Taking point "O" as center draw the circle.



4. 8.5 cm

Steps of construction:

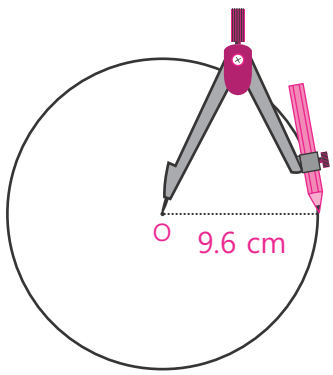
1. Take a point on the paper.
2. Open the compass 8.5 cm.
3. Taking point "O" as center draw the circle.



5. 9.6 cm

Steps of construction:

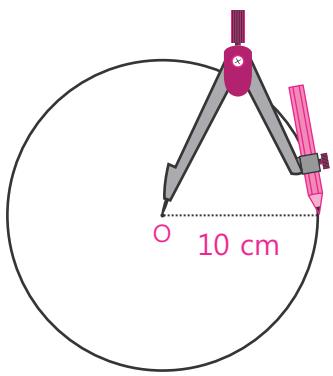
1. Take a point on the paper.
2. Open the compass 9.6 cm.
3. Taking point "O" as center draw the circle.



6. 10 cm

Steps of construction:

1. Take a point on the paper.
2. Open the compass 10 cm.
3. Taking point "O" as center draw the circle.



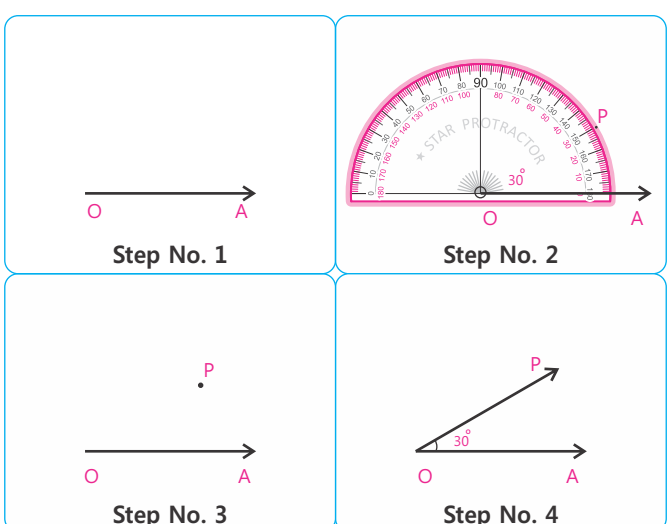
B Draw the following angles with the help of protractor.

پروٹریکٹر کی مدد سے مندرجہ ذیل زاویے کھینچیں۔

1. 30°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 30° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 30°.



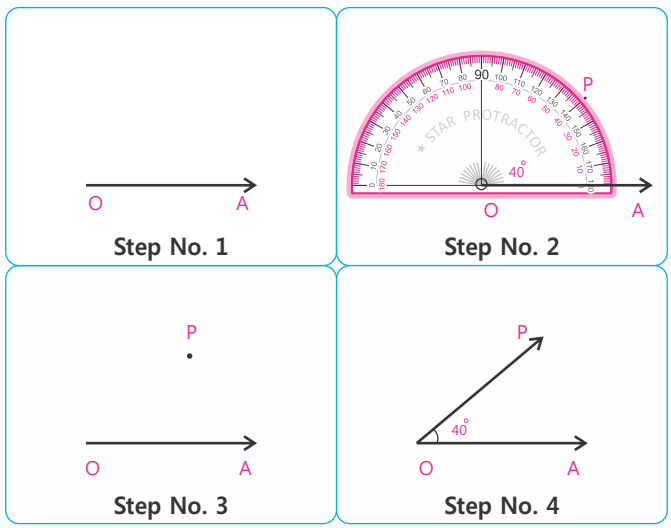
5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.

6. Hence, ∠AOP = 30° is required angle.

2. 40°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 40° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 40°.



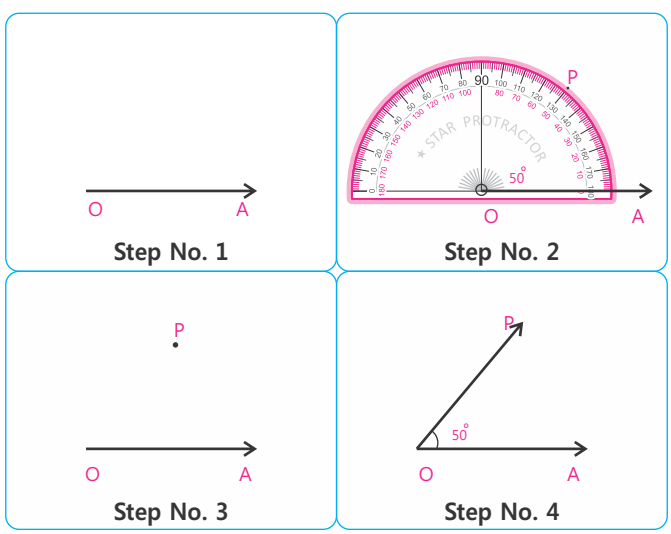
5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.

6. Hence, ∠AOP = 40° is required angle.

3. 50°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 50° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 50°.



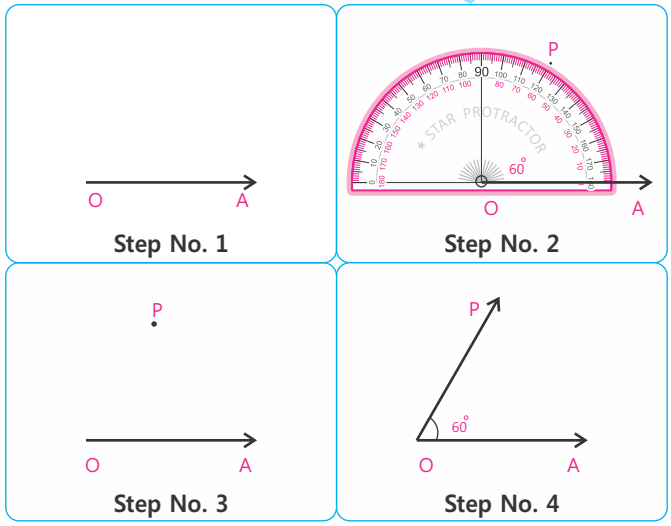
5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.

6. Hence, ∠AOP = 50° is required angle.

4. 60°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 60° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 60°.

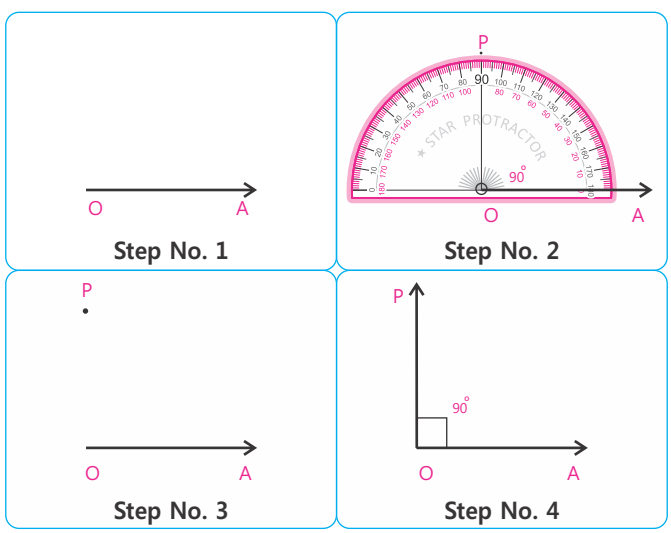


5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.
6. Hence, ∠AOP = 60° is required angle.

5. 90°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 90° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 90°.



5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.
6. Hence, ∠AOP = 90° is required angle.

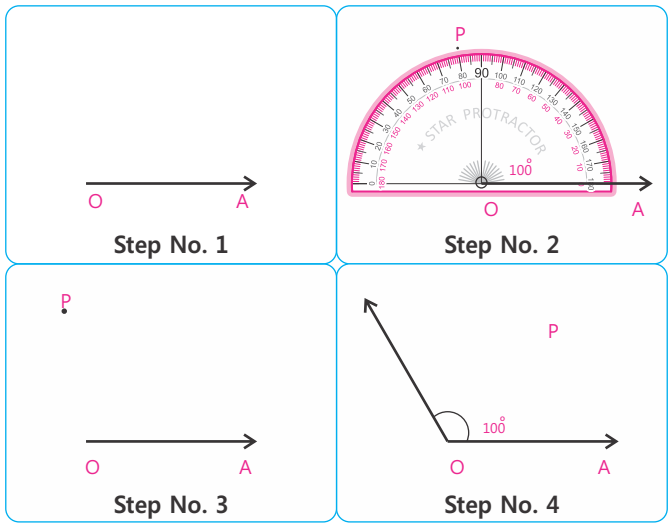
6. 100°

Steps of construction:

1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 100° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 100°.

5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.

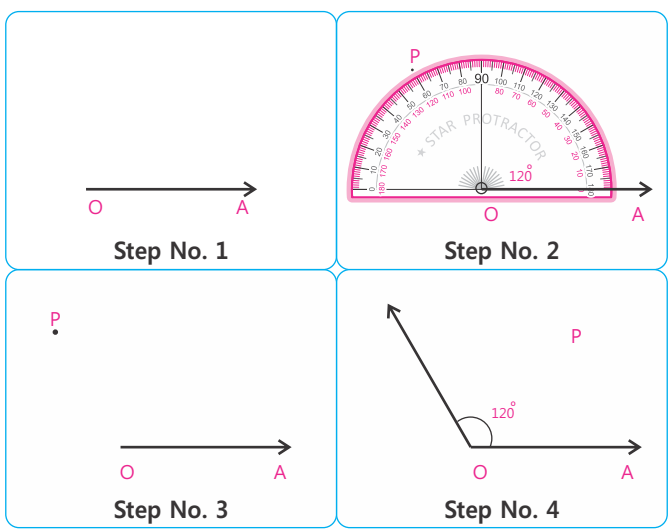
6. Hence, ##∠AOP = 100° is required angle.



7. 120°

Steps of construction:

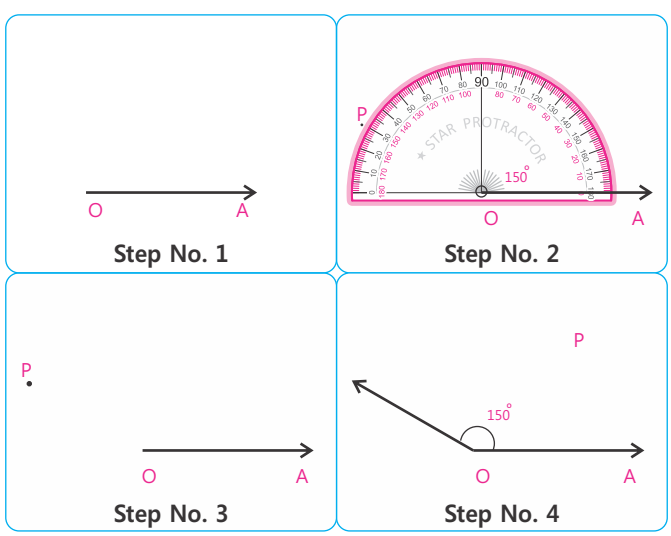
1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 120° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 120°.
5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.
6. Hence, #∠AOP = 120° is required angle.



8. 150°

Steps of construction:

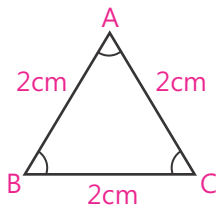
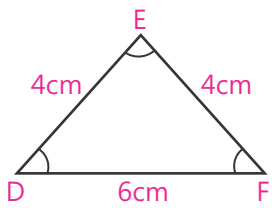
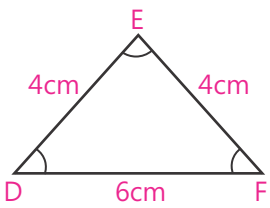
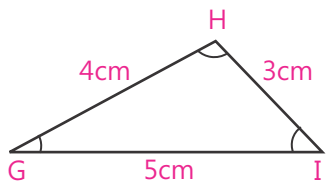
1. Draw a ray OA.
2. Place the centre of protractor at point O.
3. Find the number 150° along the circular edge of the protractor.
4. Mark a point P on the paper opposite to 150°.
5. Join point 'O' with 'P' and the marked point with the help of your ruler by drawing a ray OP.
6. Hence, #∠AOP = 150° is required angle.



EXERCISE مشق 10.3

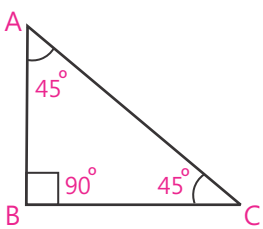
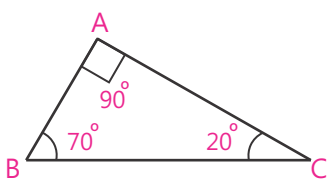
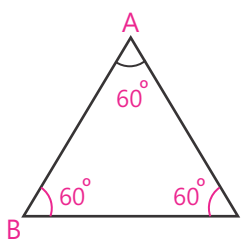
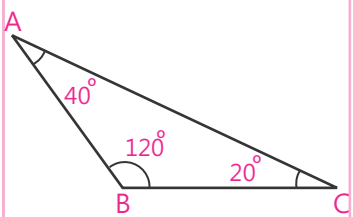
A Name the following triangle w.r.t sides.

اضلاع کے لحاظ سے مندرجہ ذیل مثلثوں کے نام لکھیں۔

 Equilateral Triangle	 Isosceles Triangle	 Isosceles Triangle	 Scalene Triangle

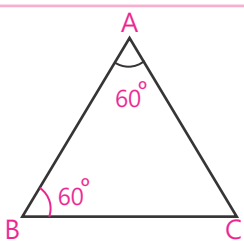
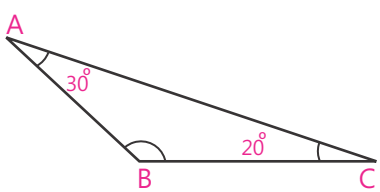
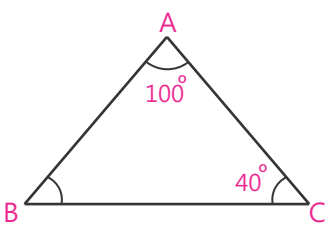
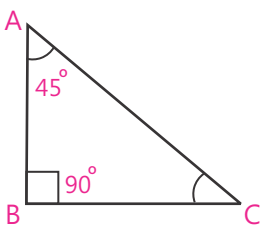
B Name the following triangle w.r.t angles.

زاویوں کے لحاظ سے مندرجہ ذیل مثلثوں کے نام لکھیں۔

 Right-Angle Triangle	 Right-Angle Triangle	 Acute-Angle Triangle	 Obtuse-Angle Triangle

C Write the measure of the third angle in each triangle.

ہر مثلث کے تیسرے زاویے کی پیمائش لکھیں۔

 180° – 60° – 60° = 60°	 180° – 30° – 20° = 130°
 180° – 100° – 40° = 40°	 180° – 90° – 45° = 45°

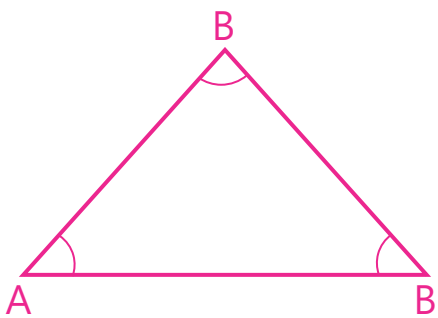
(D) Write the names of triangle w.r.t sides. اضلاع کے لحاظ سے تین مثلثوں کے نام لکھیں۔

There are three types of triangle w.r.t sides.

1. Equilateral Triangle
2. Isosceles Triangle
3. Scalene Triangle

(E) Define triangle and draw its figure. مثلث کی تعریف کریں اور اس کی شکل بھی بنائیں۔

A simple closed figure with three lines segments is called a triangle. The line segments are known as sides of triangle. There are three angles of a triangle. Given Figure △ ABC is a triangle.



Unit 11

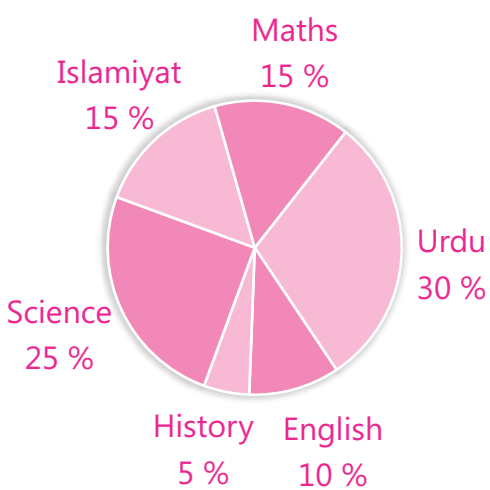
Information Handling

معلوماتی معاملات

Reading a Pie Graph پائی گراف پڑھنا

Example 1:

This pie graph shows data of a survey about 6 kinds of favourite books. Study the pie graph and answer the following questions.



یہ پائی گراف طلبا کی پسندیدہ کتب کے سروے سے متعلق ہے۔ اس پائی گراف کا مطالعہ کریں اور مندرجہ ذیل سوالوں کے جوابات لکھیں۔

1. How many more % lovers of Urdu are there than the English? 20 %

انگریزی کے مقابلے میں اردو کے کتنے فیصد زیادہ شوقین ہیں؟

2. Write the percentage of Science lovers? 25 %

سائنس کے شوقین لوگوں کی فیصد لکھیں۔

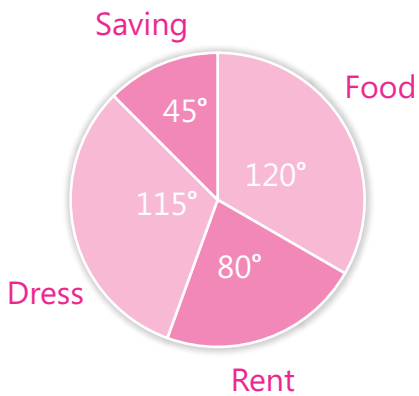
3. How many less % lovers of Maths are there than Science? 10 %

ریاضی کے شوقین سائنس کے مقابلے میں کتنے فیصد کم ہیں؟

4. What is the percentage of Islamiyat lovers? 15 %

اسلامیات کے شوقین کتنے فیصد ہیں؟

EXERCISE مشق 11



(A) Zahid earns Rs. 16000 per month. His monthly expenditure is shown in the pie graph. Read the graph and answer to the following questions.

زاہد ایک ماہ میں 16000 روپے کماتا ہے۔ اس کے ماہانہ خرچ پائی گراف میں دکھایا گیا ہے۔ پائی گراف پڑھیں اور درج ذیل سوالات کے جوابات لکھیں۔

1. In how many equal sectors the pie graph has been divided? 4

پائی گراف کو کتنے برابر حصوں میں تقسیم کیا گیا ہے؟

2. What amount he spends on food? وہ خوراک پر کتنی رقم خرچ کرتا ہے؟

$$= \frac{\overset{10}{\cancel{120} \times 16000}}{\underset{3}{\cancel{360}}} = \frac{16000}{3} = 5333.33$$

3. What amount he spends on rent? وہ کرائے پر کتنی رقم خرچ کرتا ہے؟

$$= \frac{\overset{2}{\cancel{8}0} \times 16000}{\underset{9}{\cancel{360}}} \qquad \frac{32000}{9} = 3555.56$$

4. What amount he spends on dress? وہ لباس پر کتنی رقم خرچ کرتا ہے؟

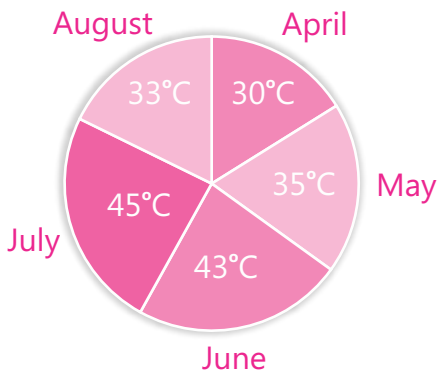
$$= \frac{115 \times \overset{400}{\cancel{16000}}}{\underset{9}{\cancel{360}}} = \frac{46000}{9} = 5111.11$$

5. How much amount he save? وہ کتنی رقم بچاتا ہے۔

$$= \frac{\cancel{45} \times \cancel{16000}}{\cancel{360}\ \cancel{8}} = 2000$$

B The monthly temperature of a city is shown in the given pie graph. Read the graph and answer the questions.

کسی شہر کا ماہانہ درجہ حرارت دائروی گراف کی شکل میں دکھایا گیا ہے۔ گراف کا مطالعہ کر کے مندرجہ ذیل سوالات کے جوابات لکھیں۔



1. In which month the temperature . was highest? کس مہینے میں درجہ حرارت سب سے زیادہ تھا؟ July

2. Which was the 2nd hottest month? دوسرے درجہ پر گرم ترین مہینا کون سا تھا؟ June

3. What was the hottest temperature? گرم ترین درجہ حرارت کیا تھا؟ 45°C

4. How many months are there in which temperature is compared? کل کتنے مہینوں کا درجہ حرارت کا موازنہ کیا گیا ہے؟ 5 months

5. In which month the temperature is the lowest and how much? کس مہینے کا درجہ حرارت سب سے کم تھا اور کتنا تھا؟ April, 30°C