

EXERCISE 11.6

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1. Ashu had 24 pages to write. By the evening, he had completed 25% of his work. How many pages were left?

Solution:

Given total number of pages Ashu had to write = 24

Number of pages Ashu completed by the evening = 25% of 24

$$= (25/100) \times 24$$

$$= 600/100$$

$$= 6$$

Therefore number of pages left for completion = $24 - 6 = 18$ pages

2. A box contains 60 eggs. Out of which $16\frac{2}{3}\%$ are rotten ones. How many eggs are rotten?

Solution:

Given that total number of eggs = 60

Number of eggs rotten = $16\frac{2}{3}\%$ of 60 eggs

$$= 16.66\% \text{ of 60 eggs}$$

$$= (16.66/100) \times 60$$

$$= 10 \text{ eggs}$$

Therefore number of eggs rotten = 10

3. Rohit obtained 45 marks out of 80. What per cent marks did he get?

Solution:

Given total number of marks = 80

Marks scored by Rohit = 45

Percentage obtained by Rohit = $(45/80) \times 100$

$$= 56.25\%$$

4. Mr Virmani saves 12% of his salary. If he receives Rs 15900 per month as salary, find his monthly expenditure.

Solution:

Given Mr Virmani's salary per month = Rs. 15900

Mr Virmani's savings = 12% of Rs. 15900

$$= (12/100) \times 15900$$

$$= \text{Rs. } 1908$$

Mr Virmani's monthly expenditure = salary - savings

$$= \text{Rs. } (15900 - 1908)$$

$$= \text{Rs. } 13992$$

5. A lawyer willed his 3 sons Rs 250000 to be divided into portions 30%, 45% and 25%. How much did each of them inherit?

Solution:

Given total amount with the lawyer = Rs. 250000

First son's inheritance = 30% of 250000

$$= (30/100) \times 250000$$

$$= 750000/100$$

$$= \text{Rs. } 75000$$

Second son's inheritance = 45% of 250000

$$= (45/100) \times 250000$$

$$= 1125000/100$$

$$= \text{Rs. } 112500$$

Third son's inheritance = 25% of 250000

$$= (25/100) \times 250000$$

$$= 625000/100$$

$$= \text{Rs. } 62500$$

6. Rajdhani College has 2400 students, 40% of whom are girls. How many boys are there in the college?

Solution:

Given total number of students in Rajdhani College = 2400

Number of girls = 40% of 2400

$$= (40/100) \times 2400$$

$$= 96000/100$$

$$= 960$$

Number of boys = total number of students – number of girls

$$= 2400 - 960 = 1440 \text{ boys}$$

7. Aman obtained 410 marks out of 500 in CBSE XII examination while his brother Anish gets 536 marks out of 600 in IX class examination. Find whose performance is better?

Solution:

Given Aman's marks in CBSE XII = $410/500$

Percentage of marks obtained by Aman = $(410/500) \times 100$
= 82%

Given that Anish's marks in CBSE IX = $536/600$

Percentage of marks obtained by Anish = $(536/600) \times 100$
= 89.33%

Clearly $89.33 > 82$

Therefore, Anish's performance is better than Aman's

8. Rahim obtained 60 marks out of 75 in Mathematics. Find the percentage of marks obtained by Rahim in Mathematics.

Solution:

Given marks obtained by Rahim in mathematics = $60/75$

Percentage of marks obtained by Rahim = $(60/75) \times 100$
= 80%

9. In an orchard, $16 \frac{2}{3}$ % of the trees are apple trees. If the number of trees in the orchard is 240, find the number of other type of trees in the orchard.

Solution:

Let the number of apple trees be x

Number of trees in the orchard = 240

Number of apple trees = $16 \frac{2}{3}$ %

According to the given condition, $16 \frac{2}{3}$ % of 240 = x

= 16.66 % of 240 = x

$x = (16.66/100) \times 240$

$x = 40$ trees

Number of other types of trees = Total number of trees - number of apple trees

= $240 - 40$

= 200 trees

10. Ram scored 553 marks out of 700 and Gita scored 486 marks out of 600 in science. Whose performance is better?

Solution:

Given marks scored by Ram = 553/700

Percentage of marks scored by Ram = $(553/700) \times 100$
 $= 0.79 \times 100 = 79\%$

Also given that marks scored by Gita = (486/600)

Percentage of marks scored by Gita = $(486/600) \times 100$
 $= 0.81 \times 100 = 81$

Gita's performance (81%) is better than Ram's (79%).

11. Out of an income of Rs 15000, Nazima spends Rs 10200. What per cent of her income does she save?

Solution:

Given Nazima's total income = Rs 15000

Amount Nazima spends = Rs 10200

Amount Nazima saves = $15000 - 10200$
 $= \text{Rs } 4800$

Percentage of income Nazima saves = $(4800/10200) \times 100$
 $= 480000/10200$
 $= 32\%$

Nazima saves 32% of her income.

12. 45% of the students in a school are boys. If the total number of students in the school is 880, find the number of girls in the school.

Solution:

Given total number of students in the school = 880

Number of boys in the school = 45% of 880

$= (45/100) \times 880$
 $= 39600/100$

Number of boys = 396

Number of girls in the school = total number of students - number of boys

$= 880 - 396$

Number of girls = 484

13. Mr. Sidhana saves 28% of his income. If he saves as 840 per month, find his monthly income.

Solution:

Let Mr. Sidhana's monthly income be x

Monthly savings of Mr. Sidhana's = Rs 840

28% of x = Rs 840

$$\Rightarrow (28/100) \times x = \text{Rs } 840$$

$$\Rightarrow 28x = \text{Rs } 84000$$

$$\Rightarrow x = (84000/28) = \text{Rs } 3000$$

Mr. Sidhana's monthly income = Rs 3000

14. In an examination, 8% of the students fail. What percentage of the students pass? If 1650 students appeared in the examination, how many passed?

Solution:

Given total number of students who appeared for the examination = 1650

Number of students who failed = 8% of 1650

$$= (8/100) \times 1650$$

$$= (8 \times 1650)/100$$

$$= 13200/100$$

Number of students who failed = 132

Number of students who passed = 1650 - 132

$$= 1518$$

Percentage of students who passed = $(1518/1650) \times 100$

$$= 0.92 \times 100 = 92\%$$

92% of the students passed the examination.

15. In an examination, 92% of the candidates passed and 46 failed. How many candidates appeared?

Solution:

Let the total number of candidates be x

Number of candidates who failed = 46

Number of candidates who passed = 92% of x

According to the given condition

$$92\% \text{ of } x = x - 46$$

$$\Rightarrow (92/100) x = x - 6$$

$$\Rightarrow 92x = 100x - 4600$$

$$\Rightarrow -8x = -4600$$

$$\Rightarrow x = 4600/8 = 575$$

Number of candidates who appeared for the examination = 575

