

A house with five family members has food sufficient for 60 days. After 25 days 20 guest comes to their house. Find the number of days that the remaining food can last.

Ans: As per the given question.

At: The number of family member = 5

Let the number of units of food consumed by one person in one day = 1 unit

The number of units of food consumed by 5 persons in 60 day,  $\Rightarrow 1 \times 5 \times 60 = \underline{300}$  units

The number of units of food consumed by 5 persons in 25 day  $\Rightarrow 1 \times 5 \times 25 = \underline{125}$  units

The remaining units of food =  $300 - 125 = \underline{175}$  units

The number of guests arrived = 20

The total number of persons in the house =  $20 + 5 = 25$

The number of days that the remaining food will last =  $\frac{175}{25} = \underline{7}$  days

$\therefore$  The number of days that the remaining food will last is 7 days.

good work



✓ Amit wants to buy a T.V but he needed total Rs. 25000. He has Rs. 15000 in his account and takes Rs. 5500 from his brother. How much more money does he needed for buying the T.V?

Ans: As per the given question.

Amit wants to buy a T.V but he needed total of Rs. 25000 ←

∴ The price of T.V. = Rs. 25000

The Amount that is in Amit account = Rs. 15000

The ~~to~~ Amount that takes from his brother = Rs. 5500 ←

Amount needed to buy T.V =  
⇒ 25000 - (15000 + 5500) =  
⇒ 25000 - 20500 = 4500 ←

∴ Amit needed Rs. 4500 more for buy ←

✓ Some students (only boys and girls) from different schools appeared for an Olympiad exam. 20% of the boys and 15% of the girls failed the exam. The number of boys who passed the exam was 70 more than that of the girls who passed the exam. A total of 90 students failed. Find the number of students that appeared for

Some students (only boys and girls) from different schools appeared for an Olympiad exam. 20% of the boys and 15% of the girls failed the exam. The number of boys who passed the exam was 70 more than that of the girls who passed the exam. A total of 90 students failed. Find the number of students that appeared for the exam.

Ans: 90 the gives question.  
20% of the boys & 15% of the girls failed in the exam.

Total number of students failed = 90

The percentage of boys who passed =  $100\% - 20\% \Rightarrow 80\%$

The percentage of girls who passed =  $100\% - 15\% \Rightarrow 85\%$

Let the number of appeared boys =  $x$   
 then the number of appeared girls =  $y$

$$\text{So, } \Rightarrow \frac{80x}{100} - \frac{85y}{100} = 70$$

$$\Rightarrow 5(16x - 17y) = 7000$$

$$\Rightarrow 16x - 17y = 1400 \quad (1)$$

$$\begin{array}{r} 16x - 17y = 1400 \\ 16x - 17y = 1400 \end{array}$$

$$\text{Also } \Rightarrow \frac{20x}{100} + \frac{15y}{100} = 90$$

$$\Rightarrow 5(4x + 3y) = 9000$$

$$\Rightarrow 4x + 3y = 1800 \quad (2)$$

$$\Rightarrow 4x + 3y = 18w \quad (1)$$

Multiply 4 to eq (2)  $\Rightarrow$   $16x + 12y = 72w \Rightarrow (3)$

Subtract eq (1) from eq (3)

$$16x + 12y - 16x + 17y = 72w - 14w$$

$$\Rightarrow 29y = 58w$$

$$\Rightarrow y = \frac{58w}{29} = 2w$$

$\Rightarrow y = 2w$   
The number of girls appear =  $2w$

$$4x + 3 \times 2w = 18w$$

$$\Rightarrow 4x + 6w = 18w$$

$$\Rightarrow 4x = 12w$$

$$\Rightarrow x = 3w$$

$\therefore$  The num of boy who appear in exam is  $3w$

$\therefore$  The total num of b & g who appear in exam (boy 15w)  
=  $3w + 2w = 5w$

✓ Find the square root of the perfect square made by multiplying 4050 with a least positive integer.

As per the given.

$$4050 = 2 \times 3 \times 3 \times 3 \times 5 \times 5$$

if we multiply by 2 in 4050

$$\Rightarrow 4050 \times 2 = 8100$$

$$\text{Now } \sqrt{8100} = \sqrt{(2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 5 \times 5)}$$

$$\Rightarrow \sqrt{8100} = 2 \times 3 \times 3 \times 5 = 90$$

∴ Multiply 4050 by 2 get 8100 of  
 whose square root is 90

✓ In a class of 100 students, 50 students passed in Mathematics and 70 passed in English, 5 students failed in both Mathematics and English. How many students passed in both the subjects?

~~Ans~~

As per given question.

Total number of students = 100

Number of students failed both subject = 5

$$\begin{aligned} & \rightarrow 70 + 50 - (100 - 5) \\ & \Rightarrow 25 \end{aligned}$$

1000  
Number of students failed both subjects

⇒ Number of students passed in any one or both subjects =  $100 - 5 = 95$  ✓

⇒ Students failed in Mathematics but passed in English ⇒  $95 - 50 = 45$  ✓

Students passed in English = 70

⇒ Students failed in English but passed in Mathematics =  $95 - 70 = 25$  ✓

∴ Number of students passed in both subjects =  $95 - 45 - 25 = 25$  ✓

∴ The number of students who passed in both subjects is 25 ✓

