Exercise 10C

8% of $x = 6$

$\Rightarrow \left(\frac{8}{100} \times x\right) = 6$

$\therefore x = \left(\frac{6 \times 100}{8}\right) = 75$

Hence, the required number is 75

Q16

Answer :

(c) 270

60% of 450 $= \left(\frac{60}{100} \times 450\right)$

$= \left(\frac{3}{5} \times 450\right) = (3 \times 90) = 270$

Q17

Answer :

(d) Rs. 700

Let us assume that the original price of the chair is Rs x.

Reduce percentage on the chair = 6%

So, value of reduction on the chair = 6% of Rs. x

$$= \text{Rs}\left(\frac{6}{100} \times x\right) = \text{Rs}\left(\frac{3x}{50}\right)$$

Reduced price of the chair = Rs $\left(x - \frac{3x}{50}\right)$

$$= \text{Rs}\left(\frac{50x - 3x}{50}\right) = \text{Rs}\left(\frac{47x}{50}\right)$$

However, present price of the chair = Rs 658

Then, Rs $\left(\frac{47x}{50}\right)$ = Rs 658

$\Rightarrow$ Rs $\left(\frac{47x}{50}\right)$ = Rs 658

$\Rightarrow x$ = Rs $\left(\frac{658 \times 50}{47}\right)$ = Rs $(14 \times 50) = 700$

Hence, the original price of the chair is Rs 700

Q18

Answer :

(b) 560

Let the total number of students be 100.

Then, number of boys = 70

∴ Number of girls = (100 − 70) = 30

Now, total number of students if there are 30 girls = 100

Total number of students if there are 240 girls = $\left(\frac{100}{30} \times 240\right) = 800$

∴ Number of boys = (800 − 240) = 560

Hence, there are 560 boys in the school.

Q19

Answer :

(c) 450

Let x be the number.

(11% of x) − (7% of x) = 18

$\Rightarrow \left(\frac{11x}{100} - \frac{7x}{100}\right) = 18$

$\Rightarrow \frac{4x}{100} = 18$

$\therefore x = \left(\frac{18 \times 100}{4}\right) = (18 \times 25) = 450$

Hence, the required number is 450

Q20

Answer :

(a) 60

Let x be the number.

According to question, we have:

(35% of x) + 39 = x

$\Rightarrow \left(\frac{35}{100} \times x\right) + 39 = x$

$\Rightarrow \left(\frac{7x}{20}\right) + 39 = x$

$\Rightarrow \left(x - \frac{7x}{20}\right) = 39$

$\Rightarrow \left(\frac{20x - 7x}{20}\right) = 39$

$\Rightarrow \left(\frac{13x}{20}\right) = 39$

$\therefore x = \left(\frac{39 \times 20}{13}\right) = 60$

Hence, the required number is 60

Q21

Answer :

(c) 500

Let x be the maximum marks.

Pass marks = (145 + 35) = 180

$\therefore$ 36% of x = 180

$\Rightarrow \left(\frac{36}{100} \times x\right) = 180$

$\Rightarrow x = \left(\frac{180 \times 100}{36}\right) = (5 \times 100) = 500$

Hence, maximum marks = 500

Q22

Answer :

(d) 225

Let x be the number.

According to question, we have:

x – 40% of x = 135

$\Rightarrow \left(x - \frac{40x}{100}\right) = 135$

$\Rightarrow \left(\frac{100x - 40x}{100}\right) = 135$

$\Rightarrow \left(\frac{60x}{100}\right) = 135$

$\Rightarrow x = \left(\frac{135 \times 100}{60}\right) = 225$

Hence, the required number is 225

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