

## Arithmetics Question & Answers

1. A man has Rs.728 in denomination of 2Rs. Notes, 5 Rs. Notes and 10 Rs. Notes in the ratio 3:2:4 respectively what is the total number of notes he has?

- (a) 140
- (b) 135
- (c) 130
- (d) 100
- (e) None of these

**Answer: (b)**

**Explanation:**

Let the numbers of 2 Rs. Notes, 5 Rs. Notes and 10 Rs. Notes are  $3x$ ,  $2x$  &  $4x$

$$3x \times 2 + 2x \times 5 + 4x \times 10 = 728$$

$$\therefore x = 13$$

$$\begin{aligned}\text{Total number of notes} &= 3 \times 15 + 2 \times 15 + 4 \times 15 \\ &= 135\end{aligned}$$

2. Find out the price at which Mahesh buy the suitcase if he bought a suitcase with 15% discount on the labeled price and he sold the suitcase with 20% profit on the labeled price for Rs.2880?

(a) Rs.2040

(b) Rs.2400

(c) Rs.2604

(d) 2640

(e) None of these

**Answer: (a)**

**Explanation:**

Let labeled price be Rs. X. Then, 120% of x = 2880

$$\Rightarrow x = \left( \frac{2880 \times 100}{120} \right) = 2400.$$

$$\therefore \text{C.P.} = 85\% \text{ of Rs.2400} = \text{Rs.} \left( \frac{85}{100} \times 2400 \right) = \text{Rs. 2040}.$$

3 Find out the maximum marks obtained if Vidhi secured 50% marks in test and failed by 6 marks and Suman secured 60% marks and got 8 marks morethan minimum pass marks.

(a) 100

(b) 120

(c) 140

(d) 170

(e) None of these

**Answer: (c)**

**Explanation:**

Suppose maximum marks is x

$$\therefore \frac{60x}{100} - \frac{50x}{100} = 8 + 6 = 14$$

$$\frac{10x}{100} = 14$$

$$x = 140$$

4. Find out the % change that will occur in area if the length of rectangle is increase by 30% and the width is decrease by 15%

- (a) 10.5
- (b) 11.5
- (c) 12.5
- (d) 13.5
- (e) None of these

**Answer: (a)**

**Explanation:**

Length and width be 100 cm & 100 cm respectively

Area = 10000 sq.cm.

After change length by 30% new length = 130 cm.

New width = 85 cm.

Area = 130 × 85 sq.cm.

$$\begin{aligned}\text{Percentage change in area} &= \left( \frac{(130 \times 85) - 10000}{10000} \right) \times 100 \\ &= 10.5\%\end{aligned}$$

5. Find out the average speed of the car if a person covers the first 60 km of its journey in 15 minutes and the remaining 65 km in 35 minutes?

- (a) 42 km/hr

- (b) 50 km/hr
- (c) 125 km/hr
- (d) 120 km/hr
- (e) None of these

**Answer: (c)**

**Explanation:**

$$\text{Average speed} = \frac{\text{total distance}}{\text{total time}}$$

$$\text{Required average speed} = \frac{(60+65)}{\frac{15}{60} + \frac{45}{60}} = 125 \text{ km/hr}$$

6. Find out the days men would be required to do the work in 15 days if 20 men can reap 30 hectares in 30 days?

- (a) 10
- (b) 16
- (c) 40

(d) 20

(e) None of these

**Answer: (c)**

**Explanation:**

Use formula  $m_1w_1 = m_2w_2$

$$20 \times 30 = m_2 \times 15$$

Required men ( $m_2$ ) = 40

7. Find out the ratio of the height of the cone to that of the cylinder, if both of them have the same radius and the same volume.

(a) 3:2

(b) 3:5

(c) 3:1

(d) 1:3

(e) None of these

**Answer: (c)**

**Explanation:**

Let the height of the cone be  $h$  and that of cylinder be  $H$ .

$$\text{Then, } \frac{1}{3} \pi r^2 h = \pi r^2 H$$

$$\text{Or, } \frac{h}{H} = \frac{3}{1} = 3:1$$

8. What will be the age of the elder brother if the sum of the present ages of 2 brothers is 50 years and after 7 years the ratio of their ages will be 3:5?

(a) 31

(b) 33

(c) 35

(d) 37

(e) None of these

**Answer: (b)**

**Explanation:**

The age of elder brother =  $x$

Age of younger brother =  $50 - x$

$$\therefore \frac{50-x+7}{x+7} = \frac{3}{5}$$

$$250 - 5x + 35 = 3x + 21$$

$$8x = 285 - 21$$

$$x = 33$$

9. Find out the approximate amount of compound interest that will be obtained at the end of 5 years if Mr. Deepak invests a sum of Rs.10000/- at the rate of 10%?

(a) 6205

(b) 6105

(c) 6305

(d) 6504

(e) None of these

**Answer: (b)**

### Explanation

$$\begin{aligned} \text{C.I.} &= 10000 \left[ \left( 1 + \frac{10}{100} \right)^5 - 1 \right] \\ &= 10000 \left( \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10} \times \frac{11}{10} - 1 \right) \\ &= 10000 \left( \frac{161051 - 100000}{100000} \right) \\ &= \frac{61051}{10} = \text{Rs. 6105 (approx.)} \end{aligned}$$

10. Find out the amount invested by Vidhi if she obtained an amount of Rs.9000/- as simple interest on a certain amount at 8% after 10 years.

- (a) 11250
- (b) 12250
- (c) 17450
- (d) 18450
- (e) None of these

**Answer: (a)**

**Explanation:**

$$\begin{aligned}\text{Required amount} &= \frac{S.I. \times 100}{T \times R} \\ &= \frac{9000 \times 100}{8 \times 10} \\ &= 11250 \text{ Rs.}\end{aligned}$$