

PERCENTAGE

1. The difference between the cost price and sale price of an article is Rs.240. If the profit is 20% the selling price is

A. Rs.1,240 B. Rs.1,200 C. Rs.1,640 D. Rs.1,440

Answer: D

Difference is Rs 240 ,

Profit 20 % sale price = ?

[Sale price = cost price + profit / lose]

Cost price = 100 % , Profit = 20 %

Sale price= 120 %

20 = > 240

120 = > ? cost price = 1440 Rs

Ans : 1440 Rs .

2. Raman buys a washing machine for Rs.13,500 and sells it at a loss of 12%. What is the selling price of the washing machine?

A. 11,880 B. 11,800 C. 13,500 D. 11,870

Answer: A

cost price = 13500 Rs , Loss = 12 %

100 – 12 = 88 %

Profit = 88 %

100 = > 13500

88 = > ? Sale price = 11880 Rs

Ans : 11880 Rs .

3. The cost price of 21 pens is equal to the selling price of 20pens. The loss or gain percent is

A. 20% B. 5% C. 10% D. 15%

Answer: B

21 cost price = 20 selling price

21 C.P = 20 S.P

Interchange number & English letter

$$\frac{C.P}{S.P} = \frac{20}{21} \Rightarrow profit = 1$$

$$\Rightarrow \frac{1}{20} \times 100 = > 5 \%$$

Ans : 5 %

4. The price of a house is decreased from rupees fifteen lakhs to rupees twelve lakhs. The percentage of decrease is

A. 10% B. 20% C. 30% D. 40%

Answer: B

$$15,00,000 - 12,00,000 = 3,00,000$$

$$\Rightarrow \frac{300000}{1500000} \times 100 = > 20 \%$$

Ans : 20 %

5. A man bought an old bicycle for Rs.1, 500. He spends Rs.500 on its repair and sells it for Rs.1,800. Find the percentage of his loss.

A. 10% B. 15% C. 20% D. 5%

Answer: A

Cost price = 1500 Rs + repair cost 500 Rs

Totally C.P = 2000 Rs , S.P = 1800 Rs

Loss = 200 Rs

$$\frac{200}{2000} \times 100 = > 10 \%$$

Ans : 10 %

6. Find the single discount equivalent to a series discount of 20%, 10% and 5%.

A. 32% B. 21.6% C. 31.6% D. 32.6%

Answer: CDiscount = $100 - 20 = 80\%$, $100 - 10 = 90\%$, $100 - 5 = 95\%$

$$\Rightarrow 100 \times \frac{80}{100} \times \frac{90}{100} \times \frac{95}{100}$$

$$= 68.4 \Rightarrow 100 - 68.4 = \Rightarrow 31.6\%$$

Ans : 31.6 %

7. A TV set was sold for Rs.14,400 after giving successive discounts of 10% and 20% respectively. What was its market price?**A. Rs.21,000 B. Rs.9,000 C. Rs.20,500 D. Rs.20,000****Answer: D**Marked price = x , discount = $10\% = 90\%$, $20\% = 80\%$

Sold price = 14400

$$\Rightarrow x \times \frac{90}{100} \times \frac{80}{100} = 14400$$

$$\Rightarrow x = \frac{14400 \times 100 \times 100}{80 \times 90}$$

 $X = 20000$ Rs

Ans : 20000 Rs

8. A bicycle marked at Rs. 1,500 is sold for Rs. 1,350. What is the percentage of discount?**A. 5% B. 15% C. 10% D. 20%****Answer: C**

Marked price = 1500 Rs , sold price = 1350 Rs

Discount = 150 Rs

$$\Rightarrow \frac{150}{1500} \times 100 = \Rightarrow 10\%$$

Ans : 10 %

9. If in a class students of 50, 23 were girls and rest were boys, then the percentage of boys is

A. 46% B. 54% C. 64% D. 45%

Answer: B

Total students = 50 , Girls = 23,so boys = 27

$$\frac{27}{50} \times 100 = > 54 \%$$

Ans : 54 %

10. In a class of 50 students, 27 of them are female students others are male students. Then, find the percentage of male and female students.

A. 46%, 54% B. 54%, 46% C. 27%, 23% D. 23%, 27%

Answer: A

Total = 50 , Male = 27 , so Female = 23

Female

$$\frac{27}{50} \times 100$$

= > 54 %

Male = 46 %

Female = 54 %

Ans : 46 % , 54 %

Male

$$=> \frac{23}{50} \times 100$$

= > 46 %

11. An alloy consists of 30% copper and 40% zinc and the remaining is nickel. Find the amount of nickel in 20kilograms of the alloy.

A. 6Kg B. 4 kg C. 10 kg D. 12 kg

Answer: A

Copper = 30 % , Zinc = 40 % then Nickel = 30 %

Totally = 20 kg

100 = > 20

30 = > ? => 6 Kg

Ans : 6 Kg

12. The population of a city in the year 2014 is 1, 80,000 and increases at a rate of 20% per year. Find the population of the city in the year 2016?

A. 2,40,000 B. 2,59,200 C. 2,55,000 D. 2,54,300

Answer: B

2014 = 180000 , 2016 = ? 2 years

Increase percentage = 20 % , so 120 %

$$=> 180000 \times \frac{120}{100} \times \frac{120}{100} = > 259200$$

Ans : 259200 .

13. If the population of a village is 50,00 , 40% of them are men, 20% of them are children and the rest are women. Then the number of women,

A. 10,000 B. 20,000 C. 30,000 D. 40,000

Answer: B

Population = 50000 Man = 40 % , childrens = 20 %

Then Women = 40 %

$$=> 50000 \times \frac{40}{100} = > 20000$$

Ans : 20000

14. The difference of two numbers is 20% of the larger number. If the smaller number is 20 then the larger number is

A. 25 B. 45 C. 50 D. 80

Answer: A

Two member = X nad Y

Take large number = X, small number Y = 20

$$= x - y = x \times \frac{20}{100}$$

$$=> x - 20 = x \times \frac{20}{100} => x = x \times \frac{20}{100} + 20$$

$$=> x = \frac{20x}{100} + 20 => \frac{20x + 2000}{100} = x$$

$$\Rightarrow 100x - 20x = 2000$$

$$\Rightarrow 80x = 2000 \Rightarrow X = 25$$

Ans : 25

15. 15% of the total numbers of biscuits in a bottle is 30. Find the total number of biscuits in the bottle.

A. 100 B. 200 C. 150 D. 300

Answer: B

15 % is 30 , then 100 % = ?

$$15 \Rightarrow 30$$

$$100 \Rightarrow ?$$

$$\Rightarrow 200$$

Ans : 200

16. Find the number which is 12% less than 250.

A. 220 B. 215 C. 200 D. 245

Answer: A

$$250 \times \frac{12}{100} \Rightarrow 30$$

$$\Rightarrow 250 - 30 = 220$$

Ans : 220

$$100 \Rightarrow 250$$

$$(OR) \quad 88 \Rightarrow ?$$

$$\Rightarrow 220$$

17. The number which is 15% less than 240 is

A. 204 B. 206 C. 203 D. 205

Answer: A

$$17. 240 \times \frac{15}{100} \Rightarrow 36$$

$$\Rightarrow 240 - 36 = 204$$

Ans : 204 .

$$100 \Rightarrow 240$$

$$(OR) \quad 85 \Rightarrow ?$$

$$= 204$$

18. Find the number which is 15% less than 120

A. 100 B. 102 C. 104 D. 98

Answer: B

$$18 \cdot 100\% = 120, \quad 15\% \text{ Loss} = 85\%$$

$$100 = > 120$$

$$85 = > ?$$

$$=> 102$$

Ans : 102

19. If 30% of a = 60 then find a

A. 200 B. 50 C. 250 D. 100

Answer: A

$$30\% \text{ of } a = 60, \text{ then } a = ?$$

$$=> a \times \frac{30}{60} = 60 \quad => a = \frac{60 \times 100}{30}$$

$$a = 200$$

Ans : 200

20. If 50% of (x-y) = 30% of (x+y) then what percent of x is y?

A. 20% B. 24% C. 25% D. 23%

Answer: C

$$20. (x - y) \times \frac{50}{100} = (x + y) \times \frac{30}{100}$$

$$=> 5(x - y) = 3(x + y) \Rightarrow 5x - 5y = 3x + 3y$$

$$=> 5x - 3x = 5y + 3y \Rightarrow 2x = 8y$$

$$=> x = 8, y = 2$$

$$=> \frac{2}{8} \times 100 = > 25\%$$

Ans : 25 %

21. 40% of 1640 + ? = 35% of 980 + 150% of 850

A. 962 B. 692 C. 926 D. 629

Answer: A

$$21. 1640 \times \frac{40}{100} + x = \frac{35}{100} \times 980 + \frac{150}{100} + 850$$

$$\Rightarrow 656 + x = 343 + 1275$$

$$\Rightarrow x = 1618 - 656 = 962$$

Ans : 962 .

22. If 784 + x = 78% of 500 then the value of x is

A. 342 B. 352 c 362 D. 372

Answer: C

$$22. 784 + x = 500 \times \frac{78}{100}$$

$$784 + x = 390 \Rightarrow x = 394$$

Ans : 394

23. If x % of y is 100 and y % of z is 200, then the relation between x and z

A. z = x/2 B. z = 2x C. z = x/4 D. z = 4x

Answer: B

$$23. Y \times \frac{x}{100} = 100 \text{ ----- 1} \quad Z \times \frac{Y}{100} = 200 \text{ ----- 2}$$

$$\Rightarrow Y = \frac{200 \times 100}{Z}$$

Substitute Y values in 1 equation ,

$$\Rightarrow \frac{200 \times 100}{Z} \times \frac{x}{100} = 100 \Rightarrow 2x = Z$$

Ans : 2x = Z

24. What percent of 3x is 6y if x = 4y?

A. 20% B. 30% C. 40% D. 50%

Answer: D

$$24. \frac{a}{100} \times 3x = 6y \quad \Rightarrow x = 4y$$

$$\Rightarrow \frac{9}{100} \times 3(4y) = 6y$$

$$\Rightarrow \frac{a}{100} \times 12y = 6y \Rightarrow \frac{9}{10} = \frac{1}{2}$$

= > a = 50 %

Ans : 50 %

25. The cost price of a cow is Rs.6000. What is the selling price in order to make a profit of 30%?

A. 1800 B. 7000 C. 7800 D. 9000

Answer: C

25 . Cost price = 6000 , profit = 30 % so 130 %

100 = > 6000

130 = > ?

=> 7800 Rs

Ans : 7800 Rs .

26. A cow is sold for Rs.2400 at a profit 20%. Find the cost price.

A. Rs.1000 B. Rs.2000 C. Rs.1800 D. Rs.1500

Answer: B

26 . Sold price = 2400Rs , profit = 20 % so 120 %

120 = > 2400

100 => ?

= > 2000 Rs .

Ans : 2000 Rs.

27. On selling 12notebooks, a seller makes a profit equal to the selling price of 4 notebooks, what is his gain percent?

A. 20% B. 30% C. 40% D. 50%

Answer: D

27 . Profit = SP – CP

= > 4 = 12 – CP => Cp = 8

= > $\frac{4}{8} \times 100$ = > 50 %

Ans : 50 %

28. On selling a chair at 7% loss and a table at 17% gain, a man gains 296. If he sells the chair at 7% gain and table at 12% gain then he gains Rs.400. The actual price of the table is

A. Rs.1400 B. Rs.2400 C. Rs.400 d.Rs.800

Answer: B

$$28. \ 7\% \text{ loss} = \frac{-7x}{100}, \quad 17\% \text{ gain} = \frac{17y}{100}$$

$$\Rightarrow \frac{17y - 7x}{100} = 296 \quad \Rightarrow 17y - 7x = 29600 \quad \text{---} \rightarrow 1$$

$$\Rightarrow 7\% \text{ gain} = \frac{7x}{100}, \quad 12\% \text{ gain} = \frac{12y}{100}$$

$$\frac{12y + 7x}{100} = 400 \quad \Rightarrow 12y + 7x = 40000 \quad \text{---} \rightarrow 2$$

Substitute two equ,

$$17y - 7x = 29600 \quad \text{--} \rightarrow 1$$

$$\underline{12y + 7x = 40000 \quad \text{--} \rightarrow 2}$$

$$294 = 69600 \quad \Rightarrow 2400$$

Ans : 2400 Rs.

29. After getting two successive discounts, a shirt with a cost price o Rs.150 is available at Rs.105. If the second discount is 12.5% find the discount.

A. 10% B. 15% C. 20% D. 16%

Answer: C

$$29) \ 150 * \frac{x}{100} * \frac{87.5}{100} = 105$$

$$\Rightarrow x = \frac{105 \times 100 \times 100}{150 \times 87.5}$$

$$\Rightarrow x = 80 \quad \Rightarrow 100 - 80 = 20$$

Ans : 20

30. The price of a cloth is increased by 60%. How many percent should a family reduce its expenditure of cloth so as not to increase its monthly expenditure?

A. 37.5% B. 35.5% C. 60.5% D. 40.5%

Answer: A

30 . Amount increase and then reduce

$$\text{Formula} = \frac{x}{100+x} \times 100$$

$$\Rightarrow \frac{60}{100+60} \times 100 \Rightarrow \frac{60}{160} \times 100 \Rightarrow 37.5 \% \quad \text{Ans : 37.5 \% .}$$