

**Topic : Percentage & Profit & Loss question Bank**

**Deadline: Monday 10th March**

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1. What is 25% of 200?

- a) 25
- b) 50\
- c) 75\
- d) 100

2. If 40% of a number is 80, what is the number?

- a) 100\
- b) 150\
- c) 200\
- d) 250

3. 75% of a number is 150. What is the number?

- a) 175
- b) 200
- c) 225\
- d) 250

4. What is 15% of 120?

- a) 12\
- b) 15\
- c) 18\
- d) 20

5. If 30% of a number is 90, then the number is:\

- a) 200\
- b) 250\
- c) 300\
- d) 350

6. The price of a product increases from ₹200 to ₹250. What is the percentage increase?\

- a) 20%\

- b) 25%\\
- c) 30%\\
- d) 35%
7. A salary increases from ₹40,000 to ₹50,000. What is the percentage increase?\\
- a) 20%\\
- b) 25%\\
- c) 30%\\
- d) 35%
8. The population of a town decreased from 10,000 to 8,000. What is the percentage decrease?\\
- a) 10%\\
- b) 15%\\
- c) 20%\\
- d) 25%
9. A book's price drops from ₹500 to ₹400. What is the percentage decrease?\\
- a) 10%\\
- b) 15%\\
- c) 20%\\
- d) 25%
10. If the cost price of an item is ₹600 and the selling price is ₹450, what is the percentage loss?\\
- a) 20%\\
- b) 22.5%\\
- c) 25%\\
- d) 30%
1. #### \*\*Section 3: Percentage Comparison\*\*
11. Which is greater: 30% of 400 or 40% of 300?\\
- a) 30% of 400\\
- b) 40% of 300\\
- c) Both are equal\\
- d) Cannot be determined

12. A person spends 60% of his income and saves ₹8,000. What is his total income?\

- a) ₹15,000\
- b) ₹18,000\
- c) ₹20,000\
- d) ₹25,000

13. If A is 20% more than B, then B is how much less than A?\

- a) 20%\
- b) 16.67%\
- c) 25%\
- d) 10%

14. If the price of sugar is increased by 25%, by how much should the consumption be reduced to maintain the same expense?\

- a) 20%\
- b) 25%\
- c) 30%\
- d) 15%

15. If A's income is 40% more than B's income, then B's income is what percentage less than A's?\

- a) 28.57%\
- b) 30%\
- c) 33.33%\
- d) 40%

16. The price of an item is increased by 20% and then decreased by 10%. What is the net percentage change?\

- a) 8% increase\
- b) 8% decrease\
- c) 10% increase\
- d) 10% decrease

17. A number is increased by 30% and then decreased by 20%. What is the final percentage change?\

- a) 4% increase\
- b) 8% increase\

- c) 10% increase\\
- d) 12% increase
18. If the population of a city increases by 25% and then decreases by 20%, what is the net percentage change?\\
- a) 0%\\
- b) 5% increase\\
- c) 10% decrease\\
- d) 5% decrease
19. If a price increases by 40% and then decreases by 30%, the final change is:\\
- a) 2% increase\\
- b) 10% increase\\
- c) 10% decrease\\
- d) 2% decrease
20. The salary of a person is first increased by 20% and then decreased by 10%. What is the overall percentage change?\\
- a) 8% increase\\
- b) 10% increase\\
- c) 10% decrease\\
- d) No change
21. If an article is sold at a profit of 25%, then the selling price is what percentage of the cost price?\\
- a) 100%\\
- b) 125%\\
- c) 150%\\
- d) 175%
22. A shopkeeper allows a discount of 10% on the marked price and still makes a profit of 8%. If the marked price is ₹500, what is the cost price?\\
- a) ₹400\\
- b) ₹420\\
- c) ₹450\\
- d) ₹460

23. If the profit is 20% of the cost price, then what is the profit percentage on the selling price?

- a) 16.67%\
- b) 18%\
- c) 20%\
- d) 22%

24. A product is marked at ₹1,200 and sold for ₹960. What is the percentage discount given?

- a) 15%\
- b) 20%\
- c) 25%\
- d) 30%

25. If an article is bought for ₹500 and sold for ₹650, what is the percentage profit?

- a) 20%\
- b) 25%\
- c) 30%\
- d) 35%

26. If A's income is 20% more than B's, then B's income is what percentage less than A's?

- a) 16.67%
- b) 18%
- c) 20%
- d) 25%

27. If the ratio of boys to girls in a school is 3:2, what percentage of the total students are boys?

- e) 30%
- f) 40%
- g) 50%
- h) 60%

28. A city's population increased from 2,00,000 to 2,50,000 in 2 years. What is the percentage increase?

- a. 20%
- b. 25%
- c. 30%

- d. 35%
- 29 In an election, a candidate gets 65% of the total votes and wins by 3000 votes. How many total votes were cast?
- 5000
  - 6000
  - 8000
  - 9000
- 30 The price of an article is reduced by 30%. By what percentage must the new price be increased to restore the original price?
- 30%
  - 42.85%
  - 50%
  - 60%
- 31 If a number is increased by 50% and then decreased by 50%, what is the net percentage change?
- 0%
  - 25% decrease
  - 50% decrease
  - 75% decrease
- 32 If A is 20% taller than B, then B is shorter than A by:
- 16.67%
  - 18%
  - 20%
  - 25%
- 33 If 30% of a number is 90, what is 60% of the same number?
- 120
  - 150
  - 180
  - 200
- 34 A person spends 75% of his income and saves ₹5000. What is his total income?
- ₹15,000

- b. ₹18,000
  - c. ₹20,000
  - d. ₹25,000
- 35 The price of petrol increases by 20%. By what percentage should consumption be reduced to maintain the same expense?
- a. 16.67%
  - b. 18%
  - c. 20%
  - d. 25%
- 36 The price of a TV was first increased by 20% and then decreased by 10%. What is the overall percentage change?
- a. 8% increase
  - b. 10% increase
  - c. 10% decrease
  - d. No change
- 37 A shopkeeper marks an item 25% above the cost price and gives a 20% discount. What is his profit/loss percentage?
- a. 0%
  - b. 2% profit
  - c. 5% profit
  - d. 10% loss
- 38 If the cost price of an article is ₹500 and it is sold at a loss of 20%, what is the selling price?
- a. ₹350
  - b. ₹375
  - c. ₹400
  - d. ₹450
- 39 If a salary is increased by 10% and then decreased by 10%, what is the final percentage change?
- a. 0%
  - b. 1% decrease
  - c. 1% increase

- d. 2% decrease
- 40 A student needs 40% marks to pass. He gets 200 marks and fails by 20 marks. What are the total marks?
- 500
  - 550
  - 600
  - 650
- 41 A man spends 20% of his salary on rent, 30% on food, and 10% on transport. If he saves ₹18,000, what is his salary?
- ₹40,000
  - ₹45,000
  - ₹50,000
  - ₹55,000
- 42 The cost of an item is first increased by 30% and then decreased by 30%. What is the overall percentage change?
- 0%
  - 9% decrease
  - 9% increase
  - 15% decrease
- 43) The population of a town increases by 10% every year. If the current population is 10,000, what will it be after 3 years?
- 13,310
  - 13,500
  - 14,000
  - 14,200
- 44) If 15% of A is equal to 20% of B, then A:B is:
- 3:4
  - 4:3
  - 3:5
  - 5:3
- 45) If the cost price of an item is ₹800 and the profit made is 25%, what is the selling price?
- ₹900
  - ₹1000
  - ₹1050
  - ₹1100
- 46) If the cost price (CP) of an item is ₹200 and the selling price (SP) is ₹250, what is the profit

percentage?

- a) 20%
- b) 25%
- c) 30%
- d) 40%

47) A man sells an article for ₹720 at a profit of 20%. Find the cost price.

- a) ₹600
- b) ₹620
- c) ₹650
- d) ₹700

48) A shopkeeper sells an item at a loss of 15%. If the cost price is ₹500, find the selling price.

- a) ₹400
- b) ₹425
- c) ₹450
- d) ₹475

49) A man purchased a cycle for ₹1500 and sold it at a loss of 10%. What was the selling price?

- a) ₹1200
- b) ₹1300
- c) ₹1350
- d) ₹1400

50) A trader marks his goods at 30% above the cost price and allows a discount of 10%. What is his gain percent?

- a) 17%
- b) 18%
- c) 19%
- d) 20%

Q1]

$$\Rightarrow 25\% \text{ of } 200 \rightarrow 25 \times 2 \rightarrow 50 \quad (\text{Ans b})$$

Q2]

$$\begin{array}{ccc} 100 & \xrightarrow{\cancel{x}} & 40 \\ x & \xrightarrow{\cancel{x}} & 80 \end{array}$$

$$80 \times 100 = 40x$$

$$8000 = 40x$$
$$x = \frac{8000}{40}$$

$$x = 200 \quad (\text{Ans c})$$

Q3]

$$\begin{array}{ccc} 100 & \xrightarrow{\cancel{x}} & 75 \\ x & \xrightarrow{\cancel{x}} & 150 \end{array}$$

$$150 \times 100 = 75 \times x$$

$$x = 1500 / 75$$

$$x = 200 \quad (\text{Ans b})$$

Q4]

$$\Rightarrow 15\% \text{ of } 120 \rightarrow 15 \times 12 / 10 \rightarrow 18 \quad (\text{Ans c})$$

Q5]

$$\begin{array}{ccc} 100 & \xrightarrow{\cancel{x}} & 30 \\ x & \xrightarrow{\cancel{x}} & 90 \end{array}$$

$$30\% \times 100 = 75\%$$

$$x = 300 \quad (\text{Ans c})$$

Q6]

$$\Rightarrow \frac{250 - 200}{200} \times 100 \rightarrow \frac{50}{2} \rightarrow 25\% \quad (\text{Ans b})$$

Q 7]

$$\rightarrow \frac{50K - 40K}{50K} \times 100 \rightarrow \frac{10K}{50K} \times 100^{20}$$
$$= \underline{\underline{20\%}} \quad (\text{Ans a})$$

Q 8]

$$\frac{10K - 8K}{10K} \times 100$$

~~$$\frac{2K}{10K} \times 100^{25}$$~~  
~~$$\frac{48K}{10K} \times 100$$~~

$$\rightarrow \frac{2K}{10K} \times 100$$

$$\rightarrow \underline{\underline{20\%}} \quad (\text{Ans c})$$

Q 9]

$$\frac{500 - 400}{500} \times 100$$

$$\frac{100}{500} \xrightarrow{20} \underline{\underline{20\%}} \quad (\text{Ans c})$$

Q 10]

$$\frac{600 - 450}{600} \times 100$$

$$\frac{150}{600} \xrightarrow{25} \underline{\underline{25\%}} \quad (\text{Ans c})$$

Q11]

$$\Rightarrow 30\% \text{ of } 400 \rightarrow 30 \times 4 \rightarrow 120$$
$$10\% \text{ of } 300 \rightarrow 40 \times 3 \rightarrow 120$$

(Ans C) Both are equal

Q12]

$$\Rightarrow 100 \rightarrow 60 \rightarrow 40$$
$$x \rightarrow 8000$$
$$\frac{8000}{100} \times 100 = x$$
$$800$$

$$\underline{x = 20000}$$
 (Ans C)

Q13]

$$\Rightarrow B = 100, A = 120$$

$$B = \frac{120 - 100}{120} \times 100$$
$$= \frac{1}{6} \times 100$$

$$\underline{\approx 16.67}$$

Q14]

$$\Rightarrow 100 \rightarrow 125$$

$$\text{Expense unaltered} = 125 - 25 = 100$$

$$\text{Decreased consumption} = \frac{25}{125} \times 100$$

$$= 20\% \text{ (Ans)}$$

Q15]

$$\Rightarrow B = 100, A = 140$$

$$B = \frac{140 - 100}{140} \times 100\%$$

$$= \frac{\cancel{400}}{\cancel{140}} \times \frac{200}{100}$$

$$\approx 28.57\% \quad (\text{Ans a})$$

Q16]

$$\Rightarrow \frac{20 - 10 + (20)(-10)}{100}$$

$$= 10 - (200/100)$$

$$= 8\% \text{ increase.} \quad (\text{Ans a})$$

Q17]

$$= 30 - 20 - (600/100)$$

$$= 10 - 6$$

$$= 4\% \text{ increase.} \quad (\text{Ans a})$$

18]

$$25 - 20 + \frac{25 \times (-20)}{100}$$

$$= 5 - 5$$

$$= 0\% \quad (\text{Ans a})$$

Q19]

$$\Rightarrow 40 - 30 - (1200/100) \cdot$$

$$= 10 - 12$$

$$= -2\%$$

= 2% decrease (Ans d)

Q20]

$$\Rightarrow 20 - 10 - (200/100)$$

= 8% increase (Ans a)

Q21]

$$\Rightarrow \frac{125 - 100}{100} \times 100 \rightarrow 25\%$$

$$\frac{125}{100} \times 100 = \underline{125\% \text{ (Ans b)}}$$

Q22]

$$\Rightarrow 500 \times \frac{10}{100} = 50$$

$$MP = 450$$

$$108\% CP = 450$$

$$CP = \frac{450 \times 100}{108}$$

$$\approx \underline{416.67}$$

which is close to 420

so (Ans b)

Q23]

$$\Rightarrow \underline{\text{Ans c) } 20\%}$$

Q24]

$$\begin{aligned} & \cancel{1200} \rightarrow \cancel{960} \times 100 \\ & \cancel{1200} \\ = & \frac{20}{\cancel{1200}} \times 100 = \underline{20\% \text{ (Ans b)}} \end{aligned}$$

Q25]

$\Rightarrow$

$$\underline{650 - 500} \times 100$$

$\cancel{500}$

$$\underline{\frac{150}{8}} = \underline{30\% \text{ (Ans c)}}$$

Q26]

$\Rightarrow$

$$\underline{\text{Ans a) } 16.67\%}$$

Q27]

$\Rightarrow$

$$\frac{3}{8} \times \frac{20}{100} = \underline{60\% \text{ (Ans d/h)}}$$

Q28]

$\Rightarrow$

$$\frac{50K}{200K} \times 100$$

$$= \underline{25\% \text{ (Ans b)}}$$

Q29]

$$\rightarrow 100 \rightarrow 65 \rightarrow 35 \rightarrow 30$$
$$x \quad \cancel{100} \quad \cancel{65} \quad \cancel{35} \rightarrow 3000$$

$$10000 \\ \cancel{3000} = x \\ 7000$$

$$\Rightarrow x = 10000$$

Q30]

$$\Rightarrow 100 \rightarrow 70$$

$$= \frac{100 - 70}{70} \times 100$$

$$= \frac{30}{70} \times 100$$

$$= 42.85\% \quad (\text{Ans b})$$

Q31]

$$\Rightarrow -\frac{(50)^2}{100} \Rightarrow -\frac{2500}{100} \Rightarrow 25\% \text{ decrease}$$

$\Rightarrow 25\% \text{ decrease}$  (Ans b)

32]

(Ans a) 16.67%

33)

$$\Rightarrow 2 \times (30\% \text{ number}) \rightarrow (90) \times 2$$
$$60\% \text{ number} \rightarrow 180$$

(Ans c) 180

Q34]

$$\begin{array}{ccc} 100 & \xrightarrow{\quad} & 25 \\ x & \cancel{\xrightarrow{\quad}} & 5000 \\ \downarrow & & \\ \rightarrow x = 5000 \times 100 & & \end{array}$$

$$\Rightarrow x = 20000 \quad (\text{Ans C})$$

Q35)

$$\Rightarrow \text{Expense} = 100 * 20 = 120$$

$$\begin{aligned} &= \frac{120 - 100}{120} \times 100 \\ &= \frac{20}{120} \times 100 \\ &= \frac{5}{3} \times 100 \\ &= \frac{500}{3} \end{aligned}$$

$$\approx 16.67 \quad (\text{Ans a})$$

Q36]

$$20 - 10 - (200/100) \rightarrow 20 - 12$$



8% increase  
(Ans a)

Q37]

$$\rightarrow 100 \rightarrow 125$$

$$\frac{1}{x} \cancel{+ 25\%} \cancel{x} \cancel{100} \cancel{\downarrow} \times \frac{25}{125} \rightarrow 25 \cancel{\%}$$

$$125 - 25 = 100$$

$$\underline{S.P = C.P \quad (\text{Ans a}) 0\%}$$

Q38]

$$\rightarrow C.P = 500$$

$$\frac{20}{100} \times 500 \rightarrow 100$$

$$500 - 100 \rightarrow \underline{400 \quad (\text{Ans c})}$$

Q39]

$$\Rightarrow \frac{-1(0)^2}{100} \Rightarrow \frac{-100}{100} \Rightarrow -1\%$$

$\rightarrow 1\% \text{ decrease} \quad (\text{Ans b})$

Q40]

$$\Rightarrow 200 + 20 = 220$$

$$\begin{array}{rcl} x & \rightarrow & 220 \\ 100 & \rightarrow & 40 \end{array}$$

$$x = \frac{220 \times 10}{40}$$

$\cancel{\times \cancel{0}}$

$$\underline{x = 550 \quad (\text{Ans b})}$$

Q41]

$$\Rightarrow 100 \rightarrow 20 + 30 + 10$$



60



$$100 \xrightarrow{x} 40$$
$$x \xrightarrow{25} 18000$$

~~$$x = 4000 \times 18000$$~~

~~$$= 130000$$~~

~~$$\frac{180000 \times 100}{25} = 72000$$~~

$$x = 45000 \quad (\text{Ans b})$$

Q42]

$$\Rightarrow \frac{-(30)^2}{100} \Rightarrow -\frac{900}{100} \Rightarrow -9\%$$

$\Rightarrow 9\% \text{ decrease}$  (Ans b)

Q43]

$$10000 \times \frac{110}{100} \Rightarrow 11000$$

$$11000 \times \frac{110}{100} \Rightarrow 12100$$

~~$$12100 \times \frac{110}{100} \Rightarrow 13310 \quad (\text{Ans a})$$~~

Q44)

$$\Rightarrow 15\% A = 20\% B$$

$$\frac{A}{B} = \frac{20\% B}{100\% B}$$

5

$$\frac{A}{B} = \frac{20\%}{18\%} \Rightarrow \frac{4}{3}$$

$$A:B \Rightarrow :: 4:3 \quad (\text{Ans - b})$$

Q45)

$$\Rightarrow 800 \times \frac{125}{100} \Rightarrow \underline{1000 \quad (\text{Ans - b})}$$

Q46)

$$\frac{250 - 200}{200} \times 100$$

$$\Rightarrow \frac{50}{2} \Rightarrow \underline{25\% \quad (\text{Ans - b})}$$

Q47)

$$120\% x = 720$$

$$x = \frac{720}{120} \times 100$$

$$x = \underline{600 \quad (\text{Ans - a})}$$

Q48]

$$\Rightarrow x = \frac{500 \times 85}{100}$$

$$\underline{x = 425} \text{ (Ans b)}$$

Q49]

Ans  $\Rightarrow$   $1500 \times \frac{90}{100} = 1350$  (Ans c)

Q50]

Ans  $\Rightarrow$

$$100 \rightarrow 130 \rightarrow 117$$

$$\frac{117 - 100}{100} \times 100 = \frac{17\%}{(\text{Ans}-a)}$$