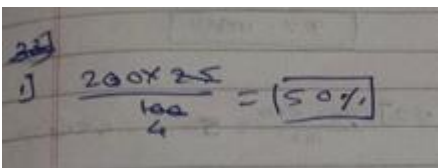


Topic : Percentage & Profit & Loss question Bank

1. What is 25% of 200?

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

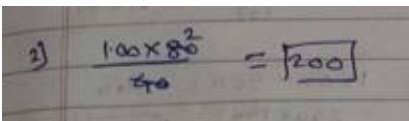
Ans:



Handwritten calculation: $200 \times \frac{25}{100} = 50$

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

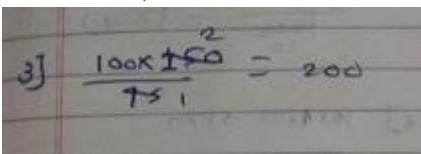
- a) 100\
- b) 150\
- c) 200\
- d) 250



Handwritten calculation: $100 \times \frac{80}{40} = 200$

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

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

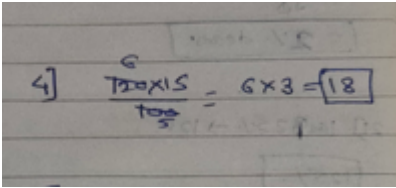


Handwritten calculation: $100 \times \frac{150}{75} = 200$

4. What is 15% of 120?

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

d) 20



4] $\frac{120 \times 15}{100} = 6 \times 3 = 18$

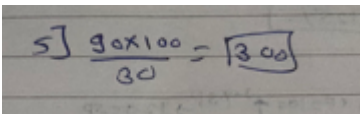
5. If 30% of a number is 90, then the number is:\

a) 200\

b) 250\

c) 300\

d) 350



5] $\frac{90 \times 100}{30} = 300$

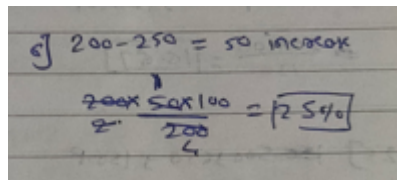
6. The price of a product increases from ₹200 to ₹250. What is the percentage increase?\

a) 20%\

b) 25%\

c) 30%\

d) 35%



6] $250 - 200 = 50$ increase
 $\frac{200 \times 50 \times 100}{200} = 250$

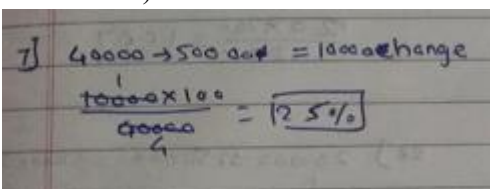
7. A salary increases from ₹40,000 to ₹50,000. What is the percentage increase?\

a) 20%\

b) 25%\

c) 30%\

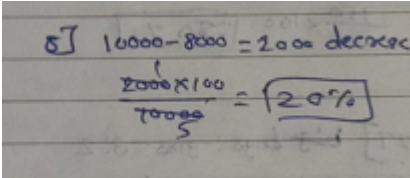
d) 35%



7] $50000 - 40000 = 10000$ change
 $\frac{40000 \times 100}{40000} = 25\%$

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%

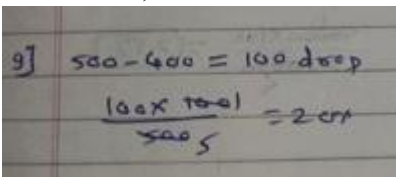


Handwritten calculation for question 8:

$$\begin{aligned} 8] \quad & 10000 - 8000 = 2000 \text{ decrease} \\ & \frac{2000 \times 100}{10000} = 20\% \end{aligned}$$

9. A book's price drops from ₹500 to ₹400. What is the percentage decrease?\

- a) 10%\
- b) 15%\
- c) 20%\
- d) 25%

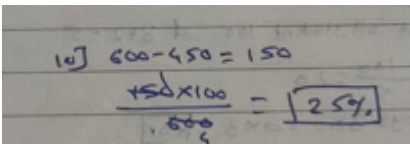


Handwritten calculation for question 9:

$$\begin{aligned} 9] \quad & 500 - 400 = 100 \text{ drop} \\ & \frac{100 \times 100}{500} = 20\% \end{aligned}$$

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%



Handwritten calculation for question 10:

$$\begin{aligned} 10] \quad & 600 - 450 = 150 \\ & \frac{150 \times 100}{600} = 25\% \end{aligned}$$

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

11] $\frac{30 \times 400}{100} = 120$ & $\frac{40 \times 300}{100} = 120$
 \Rightarrow Both equal

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

12] $40\% = 8000$
 $\therefore \frac{100 \times 8000}{40} = 20000$

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%

13] $B=100 \rightarrow 20\% \text{ more} = 120$
 $\frac{20 \times 100}{120} = 16.67\%$

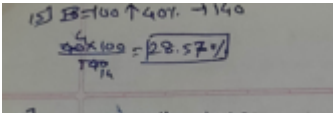
14. If the price of sugar is increased by 25%, by how much should the consumption be reduced to maintain the same expense?

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

14] initial 100 $\xrightarrow{25\%}$ 125
 $\frac{25 \times 100}{125} = 20\%$

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

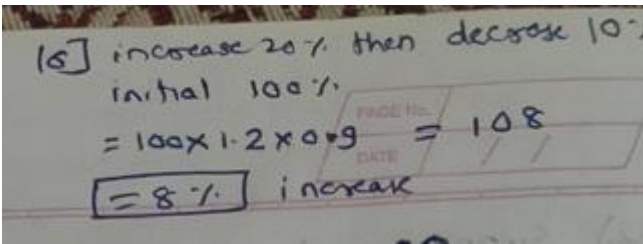
- a) 28.57%\
- b) 30%\
- c) 33.33%\
- d) 40%



15) B = 100 \uparrow 40% \rightarrow 140
 $\frac{100 \times 100}{140} = 28.57\%$

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

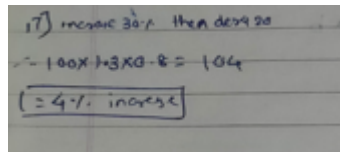
- a) 8% increase\
- b) 8% decrease\
- c) 10% increase\
- d) 10% decrease



16) increase 20% then decrease 10%
initial 100%
 $= 100 \times 1.2 \times 0.9 = 108$
 $= 8\%$ increase

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



17) increase 30% then decrease 20%
 $= 100 \times 1.3 \times 0.8 = 104$
 $= 4\%$ 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

18] $100 \times 1.2 \times 0.9$
 $= 108$
 $= 8\% \text{ increase}$

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

19] $100 \times 1.4 \times 0.7$
 $= 98$
 $= 2\% \text{ decrease}$

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

20] initial 100
 So $100 \times 1.2 \times 0.9 = 108$
 $8\% \text{ increase}$

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%

21] $100 + 25\% \rightarrow 125$
 125%

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\ -> exact ans =416
- c) ₹450\
- d) ₹460

Handwritten solution for question 22:

$$22] \frac{500 \times 10}{100} = 50 \rightarrow 450 = SP$$

$$\therefore \frac{100 \times 450}{108} = 416.67$$

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%

Handwritten solution for question 23:

$$23] CP = 100 \rightarrow 20\% SP \rightarrow 120 = SP$$

$$\therefore \frac{20 \times 100}{120} = 16.67$$

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%

Handwritten solution for question 24:

$$24] 1200 - 960 = 240$$

$$\frac{240 \times 100}{1200} = 20\%$$

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%

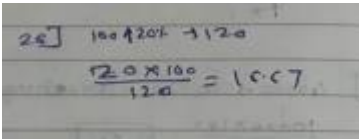
Handwritten solution for question 25:

$$25] SP = 650 \rightarrow 150 = P$$

$$\frac{150}{500} \times 100 = 30\%$$

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

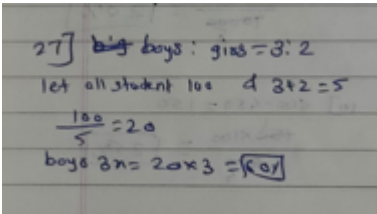
- a) 16.67%
- b) 18%
- c) 20%
- d) 25%



26] $100 + 20\% = 120$
 $\frac{120 \times 100}{120} = 100.67$

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

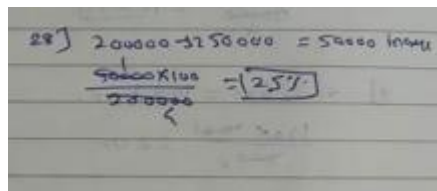
- e) 30%
- f) 40%
- g) 50%
- h) 60%



27] boys: girls = 3:2
 let all student 100 & 3+2=5
 $\frac{100}{5} = 20$
 boys 3n = 20 x 3 = 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%



28] $200000 \rightarrow 250000 = 50000$ increase
 $\frac{50000 \times 100}{200000} = 25\%$

29. In an election, a candidate gets 65% of the total votes and wins by 3000 votes. How many total votes were cast?

- a. 5000
- b. 6000
- c. 8000
- d. 9000
- e. 10000 -exact ans not in option

$$65 + 35 = 100$$

$$\frac{100 \times 30000}{80} = 10000$$

10000

30 The price of an article is reduced by 30%. By what percentage must the new price be increased to restore the original price?

- a. 30%
- b. 42.85%
- c. 50%
- d. 60%

$$100 - 30\% = 70$$

$$\frac{100}{70} = 1.42857$$

42.85%

31 If a number is increased by 50% and then decreased by 50%, what is the net percentage change?

- a. 0%
- b. 25% decrease
- c. 50% decrease
- d. 75% decrease

$$100 \times 1.5 = 150$$

$$150 \times 0.5 = 75$$

25% decrease

32 If A is 20% taller than B, then B is shorter than A by:

- a. 16.67%
- b. 18%
- c. 20%

d. 25%

32] $30\% \text{ of } 120 = 36$
 $\frac{100\%}{36} = 2.77$
 $2.77 \times 90 = 250$

33 If 30% of a number is 90, what is 60% of the same number?

- a. 120
- b. 150
- c. 180
- d. 200

33] $30\% \text{ of } 180 = 54$
 $\frac{100\%}{54} = 1.85$
 $1.85 \times 90 = 166.67$

34 A person spends 75% of his income and saves ₹5000. What is his total income?

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

34] 75% spend & save 5000
 $\therefore 5000 = 25\%$
 $5000 \times 4 = 20000$

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%

35] petrol 100 gm to 120
 $\frac{20 \times 100}{120} = 16.67$

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

35] $TV \rightarrow 100 \times 1.2 \times 0.9 = 108$
 $100 + 8 = 8\% \text{ increase}$

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

37] $MP = 1.25 \times CP$
 $CP = 100 \quad MP = 125$
 $\frac{125 \times 20}{100} = 25$
 $125 - 25 = 100$
 $CP = SP \quad 0\% \text{ profit}$

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

38] $CP = 500 \downarrow 20\%$
 $\frac{500 \times 20}{100} = 100$
 $500 - 100 = 400$

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

39] $100 \uparrow 10\% \downarrow 10\%$
 $100 \times 1.1 \times 0.9 = 99$
 $100 - 99 = 1\% \text{ decrease}$

40 A student needs 40% marks to pass. He gets 200 marks and fails by 20 marks. What are the total marks?

- a. 500
- b. 550
- c. 600
- d. 650

Handwritten solution for question 40: 40% for pass \rightarrow get 200 \rightarrow fail by 20. $\therefore 40\% = 220$. $\frac{220 \times 100}{40} = 550$

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?

- a. ₹40,000
- b. ₹45,000
- c. ₹50,000
- d. ₹55,000

Handwritten solution for question 41: 20 + 30 + 10 = 60% save 18000. $\frac{18000 \times 100}{40} = 45000$

42 The cost of an item is first increased by 30% and then decreased by 30%. What is the overall percentage change?

- a. 0%
- b. 9% decrease
- c. 9% increase
- d. 15% decrease

Handwritten solution for question 42: 42] CP = 100 \uparrow 30% \downarrow 30%. $100 \times 1.3 \times 0.7 = 91$. $100 - 91 = 9 \text{ decrease}$

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?

- a) 13,310
- b) 13,500
- c) 14,000
- d) 14,200

43) 10000 ↑ 10% for per year
 $10000 \times 1.1 \times 1.1 \times 1.1 = \boxed{13310}$

44) If 15% of A is equal to 20% of B, then A:B is:

- a) 3:4
- b) 4:3
- c) 3:5
- d) 5:3

44) $\frac{A \times 15}{100} = \frac{B \times 20}{100}$
 $\frac{A}{B} = \frac{20}{15} = \boxed{\frac{4}{3}}$

45) If the cost price of an item is ₹800 and the profit made is 25%, what is the selling price?

- a) ₹900
- b) ₹1000
- c) ₹1050
- d) ₹1100

45) CP = 800 ↑ 25%
 $800 \times 1.25 = \boxed{1000}$

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%

46) CP = 200 SP = 250
 $\frac{50}{200} \times 100 = \boxed{25\%}$

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

47] $SP = 720$ profit 20%

$$\frac{720}{1.2} = \boxed{600}$$

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

48] $CP = 500$ ↓ 15%

$$500 \times 0.85 = \boxed{425}$$

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

49] $CP = 1500$ ↓ 10%

$$1500 \times 0.9 = \boxed{1350}$$

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%