

Today's Learning – Day 1

Mathematics | Topic: Percentages

1■■■ Clear Theory (Easy Language)

Percentage means per hundred. It is used to compare quantities on a common scale. It is very important for Profit & Loss, Data Interpretation, Interest and Railway exams. Railway exams mainly focus on basic concepts and fast calculations.

Example: $25\% = 25/100 = 1/4$

2■■■ Important Formulas / Rules

$x\% = x/100$

$a\% \text{ of } b = (a \times b)/100$

Increase % = $(\text{Increase} / \text{Original}) \times 100$

Decrease % = $(\text{Decrease} / \text{Original}) \times 100$

If A is x% more than B $\rightarrow A = (100+x)\%$ of B

If A is x% less than B $\rightarrow A = (100-x)\%$ of B

■ Quick Tricks

10% = divide by 10

5% = half of 10%

25% = $1/4$

50% = $1/2$

12.5% = $1/8$

33■■% = $1/3$

■ 30 MCQs with Answers & Explanations

Q1. 20% of 250 is?

Answer: 50

Explanation: $(20 \times 250) / 100 = 50$

Q2. 45 is what percent of 180?

Answer: 25%

Explanation: $(45 / 180) \times 100 = 25\%$

Q3. Increase from 400 to 500?

Answer: 25%

Explanation: $(100 / 400) \times 100$

Q4. 60% of a number is 180. Find number.

Answer: 300

Explanation: $(180 \times 100) / 60$

Q5. 10% of 300 + 20% of 200?

Answer: 70

Explanation: $30 + 40 = 70$

Q6. 75% passed, 150 failed. Total students?

Answer: 500

Explanation: $25\% = 150$

Q7. 40 is 20% of which number?

Answer: 200

Explanation: $(40 \times 100) / 20$

Q8. 500 increased by 20% becomes?

Answer: 600

Explanation: $20\% \text{ of } 500 = 100$

Q9. Decrease from 800 to 640?

Answer: 20%

Explanation: $(160 / 800) \times 100$

Q10. 25% of 96?

Answer: 24

Explanation: $96 \div 4$

Q11. Salary 20000 increased by 10%?

Answer: 22000

Explanation: $10\% \text{ of } 20000$

Q12. 15% of 240?

Answer: 36

Explanation: $(15 \times 240) / 100$

Q13. 30% of number is 90?

Answer: 270

Explanation: $(90 \times 100) / 30$

Q14. 5% of 600?

Answer: 30

Explanation: Half of 10%

Q15. Marks reduced by 20% from 500?

Answer: 400

Explanation: $500 - 100$

Q16. 12.5% of 160?

Answer: 20

Explanation: $\frac{1}{8}$ of 160

Q17. 200 increased by 25%?

Answer: 250

Explanation: 25% of 200

Q18. 80 is what % of 400?

Answer: 20%

Explanation: $(80/400) \times 100$

Q19. Increase 10% then decrease 10%?

Answer: 1% decrease

Explanation: $-(10 \times 10)/100$

Q20. 35% of 200?

Answer: 70

Explanation: $(35 \times 200)/100$

Q21. 60% boys in 300 students. Girls?

Answer: 120

Explanation: 40% girls

Q22. 90 is 30% of which number?

Answer: 300

Explanation: $(90 \times 100)/30$

Q23. 18% of 500?

Answer: 90

Explanation: $(18 \times 500)/100$

Q24. Population 1000 to 1200?

Answer: 20%

Explanation: $(200/1000) \times 100$

Q25. 200% of 45?

Answer: 90

Explanation: 2×45

Q26. $\frac{2}{3}$ of 150?

Answer: 100

Explanation: $\frac{2}{3}$ of 150

Q27. 25% decrease of 800?

Answer: 600

Explanation: $800 - 200$

Q28. 0.5% of 1000?

Answer: 5

Explanation: $(0.5 \times 1000)/100$

Q29. 40% of 5000 saved?

Answer: 2000

Explanation: $(40 \times 5000)/100$

Q30. 50 is what % of 250?

Answer: 20%

Explanation: $(50/250) \times 100$

