

Quantitative Aptitude Shortcuts

Percentage | Profit-Loss | Interest | Time-Work

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Topics:

1. Percentage Shortcuts
 2. Profit & Loss
 3. Simple & Compound Interest
 4. Time & Work
 5. MCQ Practice
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1. Percentage — Shortcuts

Percentage is one of the most important topics. Key shortcuts:

Q. x% of y = ?

Ans: $(x/100) \times y$. Also: x% of y = y% of x (useful trick!). E.g., 8% of 25 = 25% of 8 = 2

Q. If price increases by x%, how much to decrease to restore?

Ans: Decrease by $[x/(100+x)] \times 100$ %. E.g., 25% increase → decrease by 20% to restore

Q. If price decreases by x%, how much to increase to restore?

Ans: Increase by $[x/(100-x)] \times 100$ %. E.g., 20% decrease → increase by 25% to restore

Q. Population formula: increases r% per year, after n years?

Ans: $P \times (1 + r/100)^n$

2. Profit & Loss — Shortcuts

Q. Profit% formula?

Ans: Profit% = $(\text{Profit}/\text{CP}) \times 100 = [(SP-CP)/CP] \times 100$

Q. If two items sold at same SP, one at x% profit and other at x% loss — net result?

Ans: Always a LOSS. Loss% = $(x/10)^2$ %. E.g., if x=10, loss = 1%

Q. Marked Price with discount formula?

Ans: $SP = MP \times (1 - \text{Discount}\%/100)$. Successive discounts of a% and b%: effective discount = $a+b-(ab/100)$ %

3. Simple & Compound Interest

Q. Simple Interest (SI) formula?

Ans: $SI = (P \times R \times T)/100$. where P=Principal, R=Rate%, T=Time in years

Q. Compound Interest formula?

Ans: Amount = $P \times (1 + R/100)^T$. CI = Amount - Principal

Q. SI vs CI for 2 years — difference?

Ans: $CI - SI = P(R/100)^2$. E.g., P=10000, R=10%, difference = $10000 \times 0.01 = \text{Rs } 100$

4. Time & Work — Shortcuts

Q. If A does work in x days and B in y days, together?

Ans: Together in = $(x \times y)/(x+y)$ days

Q. If A is twice as fast as B, and B takes 18 days, together?

Ans: A takes 9 days. Together = $(9 \times 18)/(9+18) = 162/27 = 6$ days

5. MCQ Practice

Q. 8% of 25 = ?

- (a) 2.5
- (b) 2

- (c) 3
- (d) 1.8

Answer: (b) 2

Q. A buys at Rs 100, sells at Rs 120. Profit%:

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

Answer: (b) 20%

Q. SI on Rs 5000 at 8% for 3 years:

- (a) Rs 1000
- (b) Rs 1200
- (c) Rs 1500
- (d) Rs 800

Answer: (b) Rs 1200

Q. A and B together finish in 6 days. A alone in 10 days. B alone:

- (a) 12 days
- (b) 15 days
- (c) 18 days
- (d) 20 days

Answer: (b) 15 days

Q. 25% of 80 + 80% of 25 = ?

- (a) 40
- (b) 60
- (c) 80
- (d) 20

Answer: (a) 40