Aptitude → Assignment 1

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Que 1) 25% of 200?

→ $\frac{25}{100} \times 200$

→ 50.

Que 2) 40% of numbers is 80. What is the number?

→ $\frac{40}{100} \times x = 80$

$40x = 8000$

$x = 8000/40$

$\therefore \boxed{x = 200.}$

Que 3) 75% of num is 150. what is the numbers.

→ $\frac{75}{100} \times x = 150$

$75x = 15000$

$\therefore \boxed{x = 200}$.

Que 4) 15% of 120.

$\frac{15}{100} \times 120$

→ 18

Que 5) 30% of num is 90. num?

$\frac{30}{100} \times x = 90.$

$30x = 9000$

$\therefore \boxed{x = 300}$

Que 6) price increase from ₹200 to ₹250, percentage increase?

→ 250 - 200 = 50

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

→ 25%

Que 7) Salary increases from 40,000 to 50,000, percentage increase?

→ 50,000 - 40,000

→ 10,000

$\frac{10000}{40000} \times 100$

= 25%.

Que 8) decreased from 10000 to 8000

→ 10,000 - 8000

→ 2000.

$\frac{2000}{10,000} \times 100$

→ 20%

ques] CP ⇒ 600 SP = 450 percentage
loss = ?

→ 600 − 450

$\frac{150}{600} \times 100 \Rightarrow 25\%$

ques10] price drop 500 to 400, P.d = ?

$\frac{100}{500} \times 100 \Rightarrow 20\%$

11) → $\frac{30}{100} \times 400 = 120$

$\frac{40}{100} \times 300 = 120$

} Both are equal.

12) → $\frac{40}{100} \times x = 8000$

$x = 20,000$

ques13] → let B = 100 A = 120

$\frac{120-100}{120} \times 100 = 16.67\%$

ques14] → orignal price = 100, new price = 125.

$\frac{25}{125} \times 100 = 20\%$

15] → let B = 100 A = 140

$\frac{140-100}{140} \times 100 = \frac{40}{140} \times 100 = 28.57\%$

16] → net change $= a - y + \frac{xy}{100}$

a = 20, b = −10

$= 20 - 10 + \frac{20 \times (-10)}{100} = 10 - 2 = 8\%$

17] → $30 - 20 + \frac{30 \times (-20)}{100} = 10 - 6 = 4\%$

18] → let initial population = 100

25% increase = 100 + 125 = 125

20% decrease = $125 - \left(\frac{20}{25} \times 125\right)$

$= 125 - 100$

$= 100$

→ No change.

→ 0%

19) → Initial price = 100.
40% increase = 100 + 40 = 140
30% decrease = 140 − (30% of 140)
= 140 − 42 = 98.
Net change = 98 − 100 = −2 (decrease)
2% decrease.

20) → Initial Salary = 100
20% inc = 120
10% dec = 120 − 12 = 108.
∴ **8% increase**

21) → SP = CP + 25% of CP
= 125% of CP
SP = 125%

22) → SP = 500 − (10% × 500) = 500 − 50 = 450.
let CP = x
450 = x + 8% of x
450 = 1.08x
x = 420

23) → P = 20% CP
P = SP − CP
let CP = 100
Prof = 20
SP = 120
Prof% on SP = $\frac{20}{120} \times 100 = 16.67\%$

24) D = 1200 − 960 / 1200 × 100 = 20%.

25) P = 650 − 500 = 150
P% = $\frac{150}{500} \times 100 = 30\%$.

26) let B = 100, then A = 120
∴ = $\frac{20}{120} \times 100 = 16.67\%$.

27) Total student = 3 + 2 = 5
Boy % = $3/5 \times 100 = 60\%$.

28) population increases −
Increase = $\frac{50,000}{200,000} \times 100 = 25\%$

29) Total votes = x
65% × x − 35% of x = 3000
30% × x = 3000
x = 10000.

30) let original price = 100
after 30% decrease 100 − 30 = 70
let increase x %.
70 + x % of 70 = 90:
0.7x = 30
x = 42.85 %

31) let initial V = 100
After 50% = 100+50 = 150
decrease 50% = 150 - 75 = 75
Net change = 75 - 100 = -25%
= 25% decrease

32) let B = 100 then A = 120
B's percentage less than A :-
$\frac{20}{120} \times 100 = 16.67\%$

33) let num = x
30% of x = 90
$x = \frac{90 \times 100}{30} = 300$
60% of 300
$\frac{60}{100} \times 300 = 180$

34) let income = x
Spending = 75% of x, Saving = 5000
$x - 0.75x = 5000$
$0.25x = 5000$
$x = 20000$

35) P. increases by 20%
let assume reduced by x%
$(1.2) \times (1-x) = 1$
$1 - x = 1/1.2 = 0.83$
$x = 16.67\%$

36) let price = 100
20% increase = 100+20 = 120
10% decrease = 120 - 12 = 108
Net change = 8% increase

37) let CP = 100.
MP = 100 + 25% = 125.
SP After 20% discount -
SP = 125 - 25 = 100
profit / loss = 0%

38) SP = 500 - 20% of 500
SP = 500 - 100 = 400

39) Initial salary = 100
10% increase = 100 + 10 = 110
10% decrease = 110 - 11 = 99.
Net change = 1% decrease

40) passing marks = 40% of total marks
200 + 20 = 40% of x
$\frac{40}{100} \times x = 220$
$x = 550$

41) let salary = x
Spending = 20% + 30% + 10% = 60% = 18000

40% of x = 18000

x = 45000

42) Int price = 10
+ 30% = 100 + 30 = 130
− 30% = 130 − 30 = 91

Net change = 9% decrease

43) $P = 10000$, $r = 10\%$, $t = 3$:

$A = P(1 + r/100)^2$

$A = 13,310$

44) Ratio A : B

15% A = 20% B

$\frac{15}{100} A = \frac{20}{100} B$

$\frac{A}{B} = \frac{20}{15} = \frac{4}{3}$

4 : 3

45) SP = 800 + 25% × 800
SP = 800 + 200 = 1000

46) $\frac{\text{Profit}}{CP} \times 100 = \frac{250 - 200}{200} \times 100 = 25\%$

47) $CP = \frac{SP}{1 + \text{Profit}/100} = \frac{720}{1.2} = 600$

48) SP = CP − 15% of CP
= 500 − 75
SP = 425

49) SP = 1500 − 10% of 1500
= 1500 − 150 = 1350

50) gain percentage-

MP = 130% of CP.

SP after 10% discount =
$\frac{130}{100} \times 90\% = 117\%$ of CP

gain % = 117 − 100 = 17%