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Q1)

$$\frac{25}{100} \times 200 = (b)\ 50$$

Q2)

$$\frac{40}{100} \times x = 80$$

$$x = \frac{10 \times 80}{40} = 200 \quad (b)$$

Q3)

$$x = \frac{100 \times 150}{75}$$

$$= 200 \quad (b)$$

75	1
× 2	
150	

Q4)

$$\frac{15}{100} \times 120 = 18 \quad (c)$$

Q5)

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

$$= \frac{9000}{3} = (c)$$

Q6 $200 \xrightarrow{50\uparrow} 250$

$= b$

$\frac{50}{200} \times 100$ (25)

Change % = $\frac{\text{New} - \text{old}}{\text{old}} \times 100$

Q7 40,000 → 50,000

$= \frac{10000}{40000} \times \frac{50}{2}$ (25)

$= (b)$

Q8

10,000 to 8,000

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

$\Rightarrow (c)$

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Q9

500 → 400

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

= (c)

Q10] CP 600 → SP 450

$\frac{25}{6 \overline{)150}} \times 100$

600

$\frac{-450}{150}$

$6 \overline{)150}^{25}$

12

30

= (c)

10% & 20%

x —10%→ y —20%→ 13200

66000 —10%→ 66000 = $13200 \times \frac{5}{100}$

$\frac{13200}{5}$

66000

= $66000 \times \frac{10}{100}$

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11] $\frac{400 \times 30}{100} = 120$ $300 \times \frac{40}{100} = 120$

⇒ (c)

12] 60% of income save 80,000

⇒ Incom save 60% so spend 40%.

$$\frac{40}{100} \times x = 80000$$

$$x = \frac{80000 \times 100}{40}$$

$$= 20,000$$

→ (c)

13] 20% A ⟶ B

→ (b)

14] Na consumption = $\frac{1}{1.25} = 0.8$

Reduction % = $(1 - 0.8) \times 100$

= 20%.

(a)

15] $= \frac{1.4x - x}{1.4x} \times 100$

$= \frac{0.4x}{1.4x} \times 100$

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

(a) 28.57%.

16] 100 + 20 = 120

120 - (10% of 120) = 120 - 12 = 108

net % change = 8% increase

⇒ (a)

17] 100 + 30 = 130

130 - (20% of 130) = 130 - 26 = 104

Net % change = 4% increase

⇒ (a)

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18. $100 + 25 = 125$

$125 - (20\% \text{ of } 125)$:

$125 - 25 = 100$

0%

(a)

19. $100 + 40 = 140$

$140 - (30\% \text{ of } 140) = 140 - 42$

$= 98$

= 2% decrease

(d)

20) $100 + 20 = 120$

$120 - (10\% \text{ of } 120) = 120 - 12 = 108$

8%

(a)

21) SP = C.P + 25% cost price

S.P = 1.25 × cost price

(b) 125%

22) C.P = x

S.P = 90% of 500

= 450

profit = 8% of x

450 = x + 0.08x

450 = 1.08x

$x = \frac{450}{1.08} = 416.67$

(b) 450

23) CP = 100 P = 20% of CP = 20

S.P = CP + Profit = 120

$P.\% \ SP = \frac{Profit}{SP} \times 100$

$= \frac{20}{120} \times 100 \approx 16.67\%$

(a) 16.67%

24)

⇒ Discount = 1200 − 960 = 240

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

(b)

25) ⇒ profit = 650 − 500

= 150

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

= 30%

(c) 30%

26) D's income = x, then A's income = 1.2x

% loss = $\frac{1.2x - x}{1.2x} \times 100$

= $\frac{0.2x}{1.2x} \times 100$

= (a) 16.67%

27) Total parts = 3 + 2 = 5

% of bags :- $\frac{3}{5} \times 100 = 60\%$

(h) 60%

28] Increase = 2,50,000 - 2,00,000
= 50,000

$= \frac{50,000}{2,00,000} \times 100$

= (b) 25%

29] vote diff = 65% - 35% = 30%
30% of total votes = 3000

Total votes $= \frac{3000}{0.30} = 10,000$

(c) 8000

30] After 30% decreases, her price = 70

$= \frac{30}{70} \times 100 = 42.85\%$

(b) 42.85%

31] Let number be 100.
After 50% increase : 150
After 50% decrease : 75
Net Change = 100 - 75 = 25%
(b)

32.

Percentage decrease = $\left(\frac{20}{120}\right) \times 100$

$= 16.67\%$

(a) 16.67%

33. 30% of $x = 90$

$x = \frac{90 \times 100}{30} = 300$

60% of 300 $= \frac{60}{100} \times 300 = 180.$

(c) 180.

34) Savings $= x - 75$ of x

$= 5000$

$x - 0.75x = 5000$

$0.25x = 5000$

$x = 20,000$

(c)

35]

⇒ Reduction Percentage $= \left(\frac{20}{120}\right) \times 100$

(a) 16.67 %

36] Original price = 100

after 20% increase: 120

after 10% decrease: 120 - (10% of 120)

$= 120 - 12 = 108$

$108 - 100 = 8\%$ increase.

(a)

37] CP = 100

m.p = 125

S.P = 125 - (20% 125) = 125 - 25 = 100

Profit / Loss = 100 - 100 = 0%

(a) 0 %

38] SP = CP - 20% of CP = 500 - 100 = 400

(c) 400.

39] After 10% increas 110 - (10% of 110) = 110 - 11 = 99

net change = 100 - 99 = 1% decrease.

(b)

40) 40% of x = 200 + 20 = 220

$x = \frac{220 \times 100}{40} = 550$

(b)

41) Saving = 40% of x

40% of x = 18000

$x = \frac{18,000 \times 100}{40}$

= 45000

(b)

42) after 30% decrease.

130 - 30% of 130)

130 - 39 = 91

Net Change = 100 - 91

= 9% decrease.

(b) 9% decrease.

43. population = $10,000 \times (1.1)^3$

$= 10,000 \times 1.331$

$= 13,310$

(a) 13,310

44

» $15A = 20B$

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

45] SP = 800 + (25% of 800)

$= 800 + 200$

$= 1000$ (b)

46]

$\text{Profit \%} = \left(\frac{250-200}{200}\right) \times 100$

$= 25\%$

(b) 25%

47] A man sells an article for 720 at a profit of 20%.

$CP = \frac{SP}{1.2} = \frac{720}{1.2} = 600$ (a)

SP: 500 − (15% of 500)

= 500 − 75

= 425 (b)

48)

→ SP: 1500 − (10% of 1500)

= 1500 − 150

= 1350

50) Selling price: 130 − (10% of 130)

= 130 − 13

= 117

Profit % = $\left(\frac{117 - 100}{100}\right) \times 100$

= 17%