Percentage Questions

Que] 25% of 200

→ $\frac{1}{4} \times 200 \Rightarrow \boxed{50}$ ✓

Que 2]

→ 40% of number is ~~150~~ 80. what is number?

⇒ 40% → ~~150~~ 80

~~1%~~ → $\frac{~~150~~ 80}{40}$; ~~100%~~ → $\frac{~~150 \times 100~~}{40}$ →

1% → $\frac{2\ 80}{40}$; 100% → 2×100 ⇒ $\boxed{200}$ ✓

Que 3] 75% of a number is 150. number?

→ 75% → 150

100% → $\frac{~~150~~^{2}}{~~75~~1} \times 100 \Rightarrow \boxed{200}$ ✓

Que 4] 15% of 120?

→ $\frac{~~15~~^{3} \times ~~120~~^{6}}{~~100~~\ 2} \Rightarrow \boxed{18}$ ✓

Que 5] 30% of a number is 90, then number?

→ 30% → 90

100% → $\frac{^{3}~~90~~}{30} \times 100 \Rightarrow \boxed{300}$

Que 6] Increased from 200 to 250, what is percentage increase

→ 200 → 250

100% → 200

$\frac{250}{~~200~~} \times 100$ → 125% → 25% ↑

~~17~~ →

Que 7 Salary increases from 40000 to 50000 Percentage increase?

→

$$\frac{\text{Final} - \text{Initial}}{\text{Initial}} \times 100$$

$$\frac{10000}{40000} \times 100 \Rightarrow 25\%$$

Que 8 Population of a town is decreased from 10000 to 8000. Percentage decrease?

→

$$\frac{\text{Final} - \text{Initial}}{\text{Initial}} \times 100$$

$$\frac{2000}{10000} \times 100 \Rightarrow 20\%$$

Que 9

→ Drops 500 to 400. Percentage decrease?

→

$$\frac{\text{Final} - \text{Initial}}{\text{Initial}} \times 100$$

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

Que 10]

→ Initial

Cost price → 600

Selling price → 450

Final

$\frac{600-450}{600} \times 100 \Rightarrow \frac{150}{6}$ 25%.

Que 11]

→ $\frac{30}{100} \times 400 = \frac{40}{100} \times 300$

$120 = 120$

Both are equal

Que 12]

→ 60% spends and saves 8000, Total income?

→

60 = 100% − 60% ⇒ 40% saved.

40% → 8000

100% → $\frac{8000}{40} \times 100$

Total income → 20000

Que 13]

→ A is 20% more than B, the B is how much in less than A.

⇒ A − B ⇒ 20%

A − B ⇒ $\frac{1}{5}$ B → 100%.

A → 120%.

percent decrease = $\frac{\text{final} - \text{Initial}}{\text{Initial}} \times 100$

$\frac{20}{120} \times 100 \Rightarrow \frac{100}{6} \Rightarrow 16\frac{2}{3}$

Que 14]

→

$\frac{15}{100} \rightarrow 1$

Sugar initial → 100%

Price increased 25%

original → 100

25% increase

New price is 125% of original ⇒ $\frac{15}{\text{of}} \times 100$

New consumption = $\frac{100}{125} \times 100 \Rightarrow 80\%$

Reduction in Consumption → Original − Final

⇒ 100 − 80 ⇒ 20%.

Que 15]

A income 40% more than B

B income what percentage less than A?

$40\% \rightarrow \frac{2}{5\cancel{0}} \Rightarrow \frac{2}{5} \Rightarrow \frac{7}{5}$

A → B

7 → 2

$\frac{5}{7} \times 100$

5×100 (14.28)

A → 140% →

B → 100%.

$\frac{100}{140} \times 100$

$\frac{2}{5}$ $\frac{1}{5}$ $\frac{1}{2}$

$40\% \rightarrow \frac{2}{5}$

Que 15]

→ A is 40% more than B
B is how much less percent than [A]

A B
7 ← -2 — 5

$\Rightarrow \frac{7-5}{7} \times 100 \Rightarrow \frac{2}{7} \times 100 \Rightarrow$ 28.57 ✓

Que 16]

→ Price → 100

Price increase 20% decrease 10%
100 × $\frac{12}{10}$ × $\frac{9}{10}$ ⇒ 108

$\Rightarrow \frac{12}{10} - \frac{9}{10} \Rightarrow +\frac{3}{10} \Rightarrow$

Price
Initial → 100
Final → 108
[+8% ↑ increase]

Que 17]

→ Number → 100
100 × $\frac{13}{10}$ × $\frac{8}{10}$ ⇒ 104 → [4% ↑ increase]

Que 18]

→ Population → 100

$100 \times \frac{125}{100} \times \frac{80}{100} \Rightarrow 100,$

Net change → 0 ✓

Que 19]

→ Price → 100

$100 \times \frac{140}{100} \times \frac{70}{100} \Rightarrow 98.$

100 − 92 → 2% ↓ decrease

14 × 7 = 98

Que 20]

→ Salary → 100

$100 \times \frac{120}{100} \times \frac{90}{100} \Rightarrow 108 \rightarrow$ 8% ↑ increase

Que 21]

→ Cost price → 100

$\frac{25}{100} \times 100 \rightarrow 25.$

→ 125

$\frac{125}{100} \times 100 \rightarrow$ 125%

Qu 22]

→ Shopkeeper allows a discount of ~~10%~~ on marked price still make 8% profit marked price → (500)

~~10% of 500~~ 10% of 500 → 50

450 → still 8% profit

$\frac{8}{100} \times 450 \Rightarrow 36$ after discount

450 − 36 ⇒ 414

450
36
414

Selling price → 450

Profit percent → 8%

Cost price → $\frac{450}{108} \times 100$

→ 416.6 → 420 ✓

Qu]

for CP → 100

Profit → 20% of CP → 20

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

S.P → 120

20% of 120

→ $\frac{24 \times 120}{100}$ → 144

$\frac{\text{Profit} \times 100}{SP}$

Que 24]

→ Marked at = 1200
Sold for = 960

1200
960
240

1200 − 960
→ [240] discount.

20 →

$\frac{240}{1200} \times 100$

⇒ [20 % discount]

Que 25]

→ Cost price → 500
S.P → 650
Profit ⇒ 650 − 500 → 150.

$\frac{150}{500} \times 100 \Rightarrow$ [30] %.

Que 26]

→

A B
6 5
−1

120
100

$\frac{1}{6} \times 100 \Rightarrow$ [16.67 %]

Que 27]

→ $\frac{B}{G} \Rightarrow \frac{3}{2}$

B + G ⇒ [5] B → $\frac{3}{5}$ → 60 %.

Que 28]

→ Population Increase :

200,000 → 250,000

$\frac{25}{20} \times 100 \Rightarrow 50$ 125%

25% ↑ increase.

Que 29]

→

100 → 65% → winner

35% → loser

45% 35% ↑

Winning margin → 65% - 35% → 30%

which is 3000

30% → 3000

100% → $\frac{3000 \times 100}{30}$

Total votes → 10000

Que 30]

→ Price → 100

reduce → 30% of 100 → 70

30

$\frac{70 \times 130}{100}$ 70 → 100

$\frac{30 \times 100}{70}$ → 42.85%

Qu 31]

→ Number → 100

increased by 50% → 150

$$100 \times \frac{150}{100} \times \frac{50}{100} \Rightarrow 75\%$$

~~100 – 75 → 25~~

100 → 75

⇒ 25% decrease.

Qu 32]

A B

1 → 6 5

6 5

1

$$\frac{1}{6} \times 100 \Rightarrow 16.67\%$$

Qu 33]

→ $\frac{30}{100} \times$

30% → 90

60% → $\frac{90}{30} \times 60$

⇒ 180 ✓

Que 34]

→ Total income

→ Spend + saving

100 - 75 ⇒ 25%

25% → 5000

1 → $\frac{5000}{25}$

100% → $\frac{5000}{25_1} \times \cancel{100}^{4}$

⇒ 20,000.

Que 35]

→ Price → 100

→ 20% ↑ → 120

⇒ $\frac{6}{5}$ 120

120 ← 20 — 100

$\frac{20}{120} \times 100 \Rightarrow$ 16.67%

Que 36] Price of TV ⇒ 100

$\cancel{100} \times \frac{128}{\cancel{100}} \times \frac{99}{100} \Rightarrow 108$

100 → 108

+8% ↑ increase

Que 37]

→ C.P → 100

→ Marked → 125

$(125) - \left(\frac{20}{100} \times \overset{25}{\cancel{125}}\right)$

⇒ 100.

C.P → 100 → 100

No change

Que 38]

→ C.P → 500

$500 \times \frac{80}{100} \rightarrow$ 400

Que 39]

→ 100

→ $100 \times \frac{110}{100} \times \frac{90}{100}$

⇒ 99

→ 1% decrease ↓

Que 40]

40% → 220

1% → $\frac{220}{40}$

5 5 0

100% → $\frac{220 \times 100}{40}$

550 marks

Que 41]

→ 20

rent + food + transport + saving = 100%

40% → 18000

1% → $\frac{18000}{40}$

4 5 0 0 0

100% → $\frac{18000 \times 100}{40}$

→ 45,000

Que 42]

→ 100 × $\frac{130}{100}$ × $\frac{70}{100}$

⇒ 91

→ 9% decrease

Que 43]

→ Population ⇒ 10000

10000 × $\frac{110}{100}$ × $\frac{110}{100}$ × $\frac{11}{10}$

110 × 11 × 11

→ 110 × 121

⇒ 13310

121
110
000
121
1331

Que 44]

→ $\frac{15}{100}A = \frac{20}{100}B$

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

4 : 3

Que 45]

CP → 800

P → 25%

800 × $\frac{25}{100}$

200

S.P → CP + P ⇒ 1000

Qu 46

→ C.P → 200

S.P → 250

$\frac{250-200}{200} \times 100$

⇒ 25%

Qu 47

→ S.P → 720

P → 20%

C.P → S.P − P

⇒ ~~720 − $\frac{20}{100} \times 720$~~

⇒ ~~720 − 144~~

⇒

120% → 720

1% → $\frac{720}{120}$

100% → 6×100

C.P ⇒ 600

Qu 48

→ 100 → C.P

85 → S.P

$500 \times \frac{15}{100} \Rightarrow 75$

C.P S.P ⇒ 500 − 75

⇒ 425

Qu 49

→ C.P → 1500

S.P loss of 10%

→ S.P → $1500 \times \frac{90}{100}$ → 1350 ⇒

Qu 50

→ CP → 100

MP → $130 \times \frac{90}{100}$ ⇒ 117

100 → 117

17% ↑