21 Days challenge

06/07/2021

Day-1

Aptitude Topic : Percentages

1/1 = 100% 1/2 = 50% 1/3 = 33.33% 1/4 = 25%

1/5 = 20% 1/6 = 16.66% 1/7 = 14.2857% 1/8 = 12.5%

1/9 = 11.11% 1/10 = 10% 1/11 = 09.09% 1/12 = 8.33%

[Short cut : $\frac{1/2}{2} = \frac{50}{2}$ = 25% and .... soon]

Concepts :

100% of any number = The same no.

For Eg :- 100% 25 = 25 100% 90 = 90

50% of any no = Half of that number

Eg : 50% 10 = 5

1) 25% 90

$\frac{1}{4} \times 90 = 90/4$

2) 14.2857% 5

$\frac{1}{7} \times 5 = 7/5$

Problems :

1) Given :

original price = 3000 offer = 75%

If offer is given to product, what is final price?

75% 3000 = 2250

3000 - 2250 = 750 ⇒ Final price.

2) What percent is 42 kg of 336 kg ?

x% 336 = 42

$x\%\ 336 = 42$

$112 \quad 14 \quad 1$

$56 \quad 8$

$x\%\ 8 = 1$

$\frac{x}{100} \times 8 = 1$

$8x = 100$

$x = 100/8$

$\boxed{x = 12.5}$

3) Express $2\left(\frac{1}{4}\right)$ in Percent

$2\left(\frac{1}{4}\right) = \frac{1}{2} = 50\%$

4) what percent is 2 min 24 sec of an hour?

$x\%\ (1\text{ hour}) = 2\text{ min } 24\text{ sec}$

$x\%\ 3600 = (2 \times 60) + 24$

$x\%\ 3600 = 144$

$36x = 144$

$x = 144/36$

$\boxed{x = 4}$

5) If 15% of y is same as 21% z, then 12.5% y is equal to what percent of z?

Sol:

$15\%\ y = 21\%\ z$

$15y = 21z$

$\boxed{y = \frac{21}{15} z}$

$12.5\%\ y = x\%\ z$

$12.5\%\left(\frac{21}{15}\right) z = x\%\ z$

$\frac{12.5 \times 21}{15} = x.$

$\boxed{x = 17.5}$

6) $y\%\ 500 + 1256 + 25\%\ 656 = 1500$

$y\%\ 500 + 1256 + \frac{1}{4}(256) = 1500$

$y\%\ 500 + 1320 = 1500$

$y\%\ 500 = 180$

$5y = 80$

$\boxed{y = 16}$

7) Given:

Income = 8000 $\quad$ %↑ = 20 %

New Income = ?

120 % 8000 = 9600

8) Price = 20000 %↓ = 25%

75% (20000) = 15000

9) Sal_A = 30% ↑ Varun

Let Varun = 100

Amit = 130 % 100

Amit = 130

% change = $\frac{130-100}{130} \times 100$

= $\frac{3000}{130}$ 23.07

= 23.07

10) Rice = 30% ↓ Wheat

Let Wheat = 100 $\quad$ Rice = 30% less

Rice = 70% 100

Rice = 70

%c = $\frac{100-70}{70} \times 100$

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

= 3000/7 = 42.85%

11) ~~cow & calf~~ cow : 2000 calf - 1400

cow = 20% ↑ calf - 30% ↑

120% (2000) 130% (1400)

= 2400 = 1720

1 dozen cow + 2 dozen calf = (12 × 2400) + 24 × (1720)

= 28800 + 41280

= 70,080