

Quant (Permutation Series)

Ratio

$$A:B = 1:2 \checkmark$$

$$B:C = 1:4 \checkmark$$

$$C:D = 2:1 \checkmark$$



$$A:B:C:D = (1 \cdot 1 \cdot 2) : (2 \cdot 1 \cdot 2) : (2 \cdot 4 \cdot 2) : (2 \cdot 4 \cdot 1)$$

$$= 1:2:8:4$$

~~A:B~~

$$P:Q = 4:1 \checkmark$$

$$Q:R = 2:3 \checkmark$$

$$R:S = 1:2$$

$$P:Q:R:S \Rightarrow (4 \times 2 \times 1) : (1 \times 2 \times 3) : (1 \times 3 \times 1) : (1 \times 3 \times 2)$$

$$\Rightarrow 8:2:3:6$$

9062395723

Quant digit finding

How to find remainder

$$\begin{array}{r}
 2^1 = 2 \\
 2^2 = 4 \\
 2^3 = 8 \\
 2^4 = 16 \\
 \hline
 2^5 = 32 \\
 64 \\
 128 \\
 256 \\
 \hline
 512 \\
 1024
 \end{array}$$

$(62)^{43}$

$\frac{43}{4} \rightarrow 3$
Remainder

2^{43}
Remainder
(last digit)
 $\rightarrow 2^3 = 8$

$(79)^{13}$

$9^{13} \rightarrow 9^1 \rightarrow 9$

$\frac{13}{4/13} = 12$
①

$(37)^{451}$

7^{451}

$\frac{451}{4}$

$7^{451} \rightarrow 7^{51} \rightarrow 7^3 \rightarrow 343$

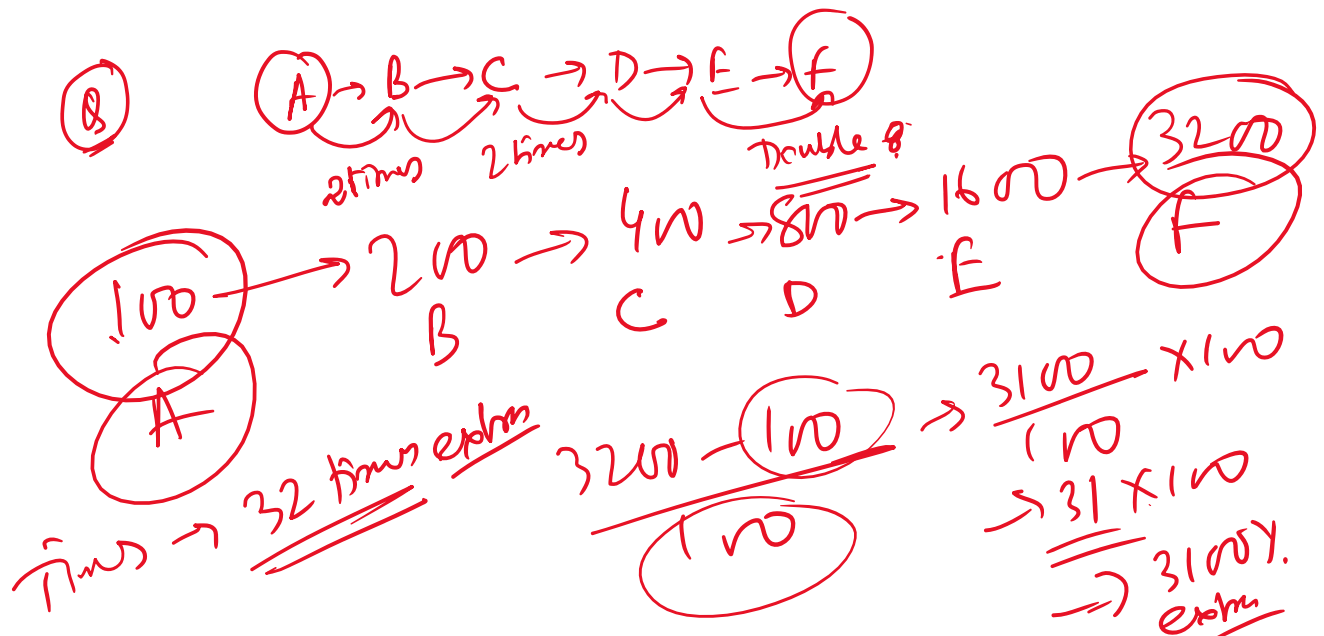
$\frac{9754}{4} = \frac{7941}{4} = \frac{541}{4}$

$\frac{541}{4}$

$\frac{51}{4/51} = 12$
③

$7^{451} \rightarrow 7^{51} \rightarrow 7^3 \rightarrow 343$
last digit $\rightarrow 3$

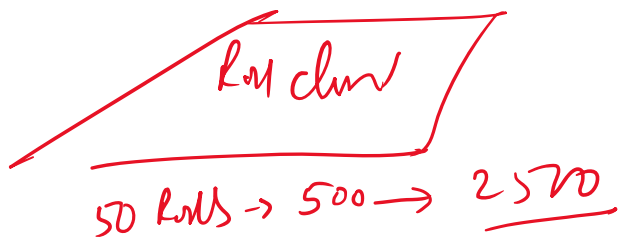
$\frac{99}{87} = 343$



How many times → 32

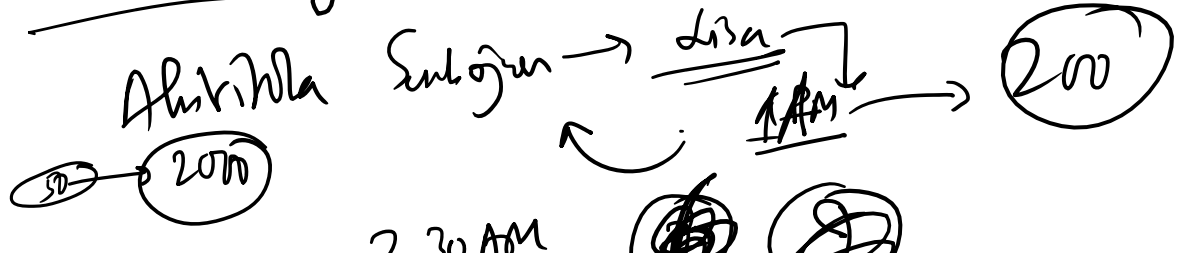
How much % → 3100%

Profit



$$\frac{2500 - 500}{500} \times 100 \Rightarrow \frac{2000}{500} \times 100 \Rightarrow 400\%$$

Real life business problem



SP → 2000

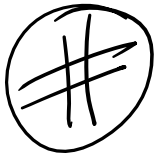
CP → 40
SP → 200

2.30 AM



$$200 - 40 \times 100 \rightarrow$$

$$\frac{160}{40} \times 100 \rightarrow 400\%$$



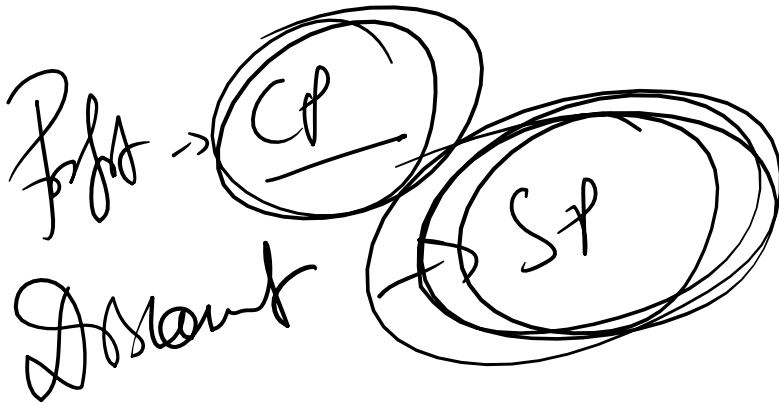
③ → 160 × 3 = 480
③ → 160 × 7 → 1120

3 Profit → $\frac{1400 - 120}{120} \times 100 = 640\%$

$$3 \overline{) 3200} \mid 1066.6$$

$$\frac{320}{3} \times 100 \rightarrow 10666.6\%$$

Expn Profit → $\frac{3200}{3} \rightarrow 1066.6\%$



300 → 2M + R
1M + R

670 - 223.3
→ 496.7

670 - 224
446.7