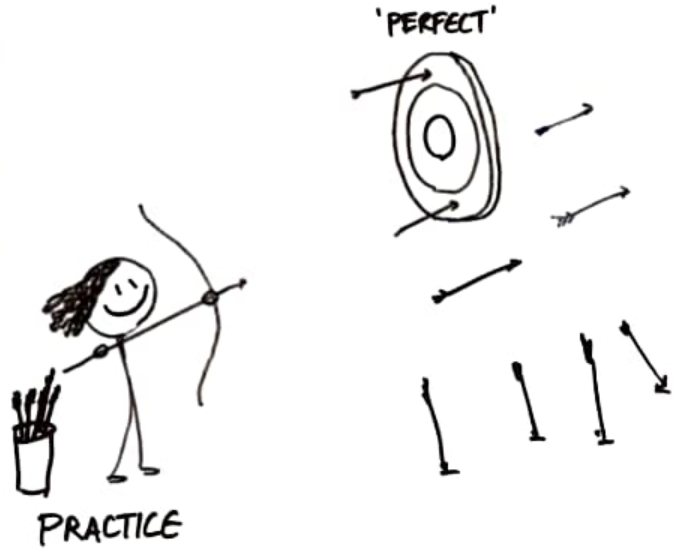
- Practice:

1. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many days can A do the work if he is assisted by B and C on every third day?
2. A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for Rs. 3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?
3. If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be?
4. A does 80% of a work in 20 days. He then calls in B and they together finish the remaining work in 3 days. How long B alone would take to do the whole work?

- Practice:
  5. A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?
  6. 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?
  7. Ravi and Kumar are working on an assignment. Ravi takes 6 hours to type 32 pages on a computer, while Kumar takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?



Work and Time

1] $A \to \frac{1}{20}$

$B \to \frac{1}{30}$

$C \to \frac{1}{60}$

Ever 3 days $\to \frac{3}{20} + \frac{1}{30} + \frac{1}{60}$

$\Rightarrow \frac{9+2+1}{60}$

$= \frac{12}{60}$

$= \frac{1}{5}$

3 days $\to \frac{1}{5}$

$\therefore$ 15 day to complete

2] $A \to \frac{1}{6}$

$B \to \frac{1}{8}$

$A+B+C \longrightarrow \frac{1}{3}$

$C \to \frac{1}{3} - \frac{1}{6} - \frac{1}{8} = \frac{1}{24}$

$A : B : C = \frac{1}{6} : \frac{1}{8} : \frac{1}{24} = 4 : 3 : 1$

$\therefore \quad C = 3200 \times \frac{1}{8} = 400$

3] $10(6M + 8B) = 1$

$\therefore 60M + 80B = 1 \quad --(1)$

$2(26M + 48B) = 1$

$\therefore 52M + 96B = 1 \quad --(2)$

$B = \frac{1}{200} \quad \therefore M = \frac{1}{100}$

Now, $15M + 20B = \frac{15}{100} + \frac{20}{200} = \frac{30+20}{200}$

$= \frac{50}{200} = \frac{1}{4}$

$\therefore$ 4 days

A → 80% → 20 day

A → 100% → $\frac{20 \times 100}{80} = 25$ day

$\therefore A \rightarrow \frac{1}{25}$

A+B → 20% → 3 days

A+B → 100% → $\frac{3 \times 100}{20} = 15$ days

$\therefore A+B \rightarrow \frac{1}{15}$

$\therefore B \rightarrow \frac{1}{15} - \frac{1}{25} = \frac{5-3}{75} = \frac{2}{75} = \frac{1}{37.5}$

$\therefore B \rightarrow \frac{75}{2}$ days = 37.5 days

5] A → $\frac{1}{18}$

B → $\frac{1}{15}$

B → 10 day → $\frac{10}{15}$

Remaining = $\frac{1}{3}$

$\therefore A \rightarrow 1 \rightarrow 18$ days

$\therefore A \rightarrow \frac{1}{3} \rightarrow 18 \times \frac{1}{3} = 6$ days

6] 10 children → $\frac{1}{14}$ ~~10 children~~

10 women → 7 days

5 women → 14 days

5 women → $\frac{1}{14}$

10 children + 5 women $= \frac{1}{14} + \frac{1}{14} = \frac{2}{14} = \frac{1}{7}$

$\therefore$ 7 days required

7] Ravi → 1 page → $\frac{6}{32}$ hours

Kumar → n → $\frac{5}{40}$ hours

Together → 1 page → $\frac{\cancel{6}^{3}}{\cancel{32}\ 16} + \frac{\cancel{5}^{1}}{\cancel{40}\ 8} = \frac{3}{16} + \frac{1}{8}$

$= \frac{3+2}{16}$

$= \frac{5}{16}$

→ 110 page $= \frac{5}{16} \times 110$

$= 34.375$

Ravi → $\frac{32}{6}$ pages / hour

Kumar → $\frac{40}{8}$ pages / hour

Together → $\left(\frac{16}{3} + 8\right) = \frac{40}{3}$ pages / hour

$\therefore$ 110 page → $\frac{110}{40/3} = \frac{110 \times 3}{40} = \frac{33}{4} = 8.25$

$\therefore$ 8 hour 15 min