



# *WORK AND WAGES*

**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?**

$$\text{C's 1 day's work} = \frac{1}{3} - \left( \frac{1}{6} + \frac{1}{8} \right) = \frac{1}{3} - \frac{7}{24} = \frac{1}{24}$$

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

$$\text{C's share} = \frac{1}{8} \times 3200 = \text{Rs. 400}$$

**A alone can complete a piece of work for Rs 300 in 6 days but by engaging an assistant the work is completed in 4 days. find the share received by the Assistant**

$$\text{Assistant's 1 day work} = \frac{1}{4} - \frac{1}{6} = \frac{1}{12}$$

**A's Share : Assistant's Share = Ratio of their 1 day work**

$$= \frac{1}{6} : \frac{1}{12} = 2 : 1$$

$$\text{Hence Assistant's share} = 300 \times \frac{1}{3} = \text{Rs. 100}$$

A and B undertake to do a piece of work for Rs.600. A alone can do it in 6 days while B alone can do it in 8 days. With the help of C they finish it in 3 days. Find B's share.

$$\text{C's 1 day work} = \frac{1}{3} - \left( \frac{1}{6} + \frac{1}{8} \right) = \frac{1}{24}$$

$$\text{A:B:C} = \text{Ratio of their 1 day's work} = \frac{1}{6} : \frac{1}{8} : \frac{1}{24} = 4:3:1$$

$$\text{A's share} = 600 \times \frac{4}{8} = \text{Rs. } 300$$

$$\text{B's Share} = 600 \times \frac{3}{8} = \text{Rs. } 225$$

$$\text{C's Share} = 600 \times \frac{1}{8} = \text{Rs. } 75$$

A, B and C contract a work for Rs. 2750 together B and C are supposed to do  $\frac{7}{11}$  of the work. How much does A get?

B+C did  $\frac{7}{11}$  of work

A did  $1 - \frac{7}{11} = \frac{4}{11}$  of work

(B+C)'s share : A' share =  $\frac{7}{11} : \frac{4}{11} = 7:4$

A's share =  $\frac{4}{11} \times 2750 = \text{Rs. } 1000$

P, Q together earn Rs. 188 per day. Q & R together earn Rs 152 per day.  
P, Q, R when working together earn Rs.300 per day. How much does Q earn daily.

$$P+Q+R = 300 \text{ (i)}$$

$$P+Q = 188 \text{ (ii)}$$

$$Q+R = 152 \text{ (iii)}$$

$$\text{(ii) + (iii)}$$

$$P+Q+Q+R = 188+152 = 340$$

$$Q+(P+Q+R) = 340$$

$$Q+300 = 340$$

$$Q = 40$$

Johnny employs 8 workers to work for 6 hours per day. In total he pays them Rs 630 for a week. How much should Jonny pay 18 workers working 4 hours per day of a week

$$6 \text{ hours per day for a week} = 6 \times 7 = 42 \text{ hrs}$$

$$8 \text{ workers for } 42 \text{ hrs get Rs } 630$$

$$8 \text{ workers for } 1 \text{ hr} = 630/42$$

$$1 \text{ worker for } 1 \text{ hr} = 630/8 \times 42 = 15/8$$

$$18 \text{ workers for } 1 \text{ hr} = 18 \times 15/8 = 135/4$$

$$4 \text{ hrs per week} = 4 \times 7 = 28 \text{ hrs}$$

$$18 \text{ hrs for } 28 \text{ hrs} = 28 \times 135/4 = 945$$