

Time and work

- A can finish a piece of work in 36 days, and B can finish it in 24 days. Find the time taken by both working together.

Sol:

$$P(A) + P(B) = P(A+B)$$

$$\frac{1}{2 \times 36} + \frac{1}{3 \times 24} = \frac{1}{x}$$
$$\frac{2 + 3}{72} = \frac{1}{x}$$

$$\frac{5}{72} = \frac{1}{x}$$

$$\frac{72}{5} = x$$

Therefore, the time taken by both working together is days $\frac{72}{5}$

LCM

2	36, 24
2	18, 12
2	9, 6
3	9, 3
3	3, 1

$$3 \times 3 = 9$$

$$9 \times 2 = 18$$

$$18 \times 2 = 36$$

$$36 \times 2 = 72$$

Date:

Day:

Q # 2 A can do a work in 12 days, B in 15 days, and C in 20 days. How long will they take together?

Sol:

$$P(A) + P(B) + P(C) = P(A+B+C)$$

$$1. \quad 5 \times \frac{1}{12} + \frac{4 \times 1}{15} + \frac{3 \times 1}{20} = \frac{1}{10}$$

$$3. \quad \frac{5 + 4 + 3}{60}$$

$$4. \quad \frac{5 \times 12}{60} = \frac{1}{10}$$

$$5. \quad \frac{60}{12} = 5$$

6. A, B, C will take together 5 days to complete the same work.

2. LCM

$$\begin{array}{l|l} 2 & 12, 15, 20 \\ 2 & 6, 15, 10 \\ 3 & 3, 15, 5 \\ 5 & 1, 5, 5 \\ & 1, 1, 1 \end{array}$$

3. multiple

$$5 \times 3 = 15$$

$$15 \times 2 = 30$$

$$30 \times 2 = 60$$