

General Ability

Q: A cricket team won 60% of the total matches it played during the year. If it lost 24 matches in all and no matches were drawn, find the number of matches played during the year.

Solution :

Let the total number of matches played be x .

The team won 60% of the matches, so it lost 40% of the matches.

Given that the team lost 24 matches, we can set up the following equation.

$$0.4x = 24$$

To find the value of x

$$x = \frac{24}{0.4}$$

$$x = 60$$

Therefore, the total number of matches played during the year is 60

Q: Two numbers are in the ratio $3:2$. If 2 is added to the first and 6 is added to the second number, they are in the ratio $4:5$. Find the numbers.

Solution:

Let the two numbers be $3x$ and $2x$.

According to the problem, if 2 is added to the first number and 6 is added to the second number, the new ratio becomes $4:5$. We can set up the following equation based on this information

$$\frac{3x+2}{2x+6} = \frac{4}{5}$$

Cross-multiplying to solve for x .

$$5(3x+2) = 4(2x+6)$$

$$15x+10 = 8x+24$$

Rearranging to isolate x .

$$15x-8x = 24-10$$

$$7x = 14$$

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$$x = \frac{14}{7}$$

$$x = 2$$

Substituting x back into the original number

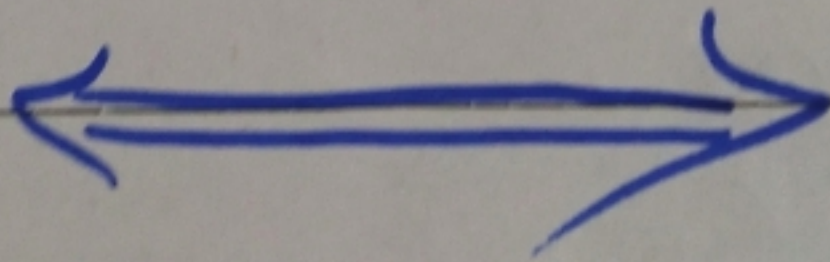
The first number is

$$3x = 3(2) = 6$$

The second number is

$$2x = 2(2) = 4$$

Therefore, the two numbers are 6 and 4.



Q: If radius of a cylinder is 10cm and height is 36cm. Find the volume of cylinder.

Solution:

The volume V of a cylinder is given by the formula

$$V = \pi r^2 h$$

where;

r is the radius of the cylinder

h is the height of the cylinder

$$\pi = 3.14$$

Given:

$$r = 10\text{cm}$$

$$h = 36\text{cm}$$

We can substitute these values into the formula to find the volume

$$V = \pi (10)^2 (36)$$

$$V = \pi (100) (36)$$

$$V = 3600\pi$$

Using $\pi = 3.14$

$$V = 3600 (3.14)$$

$$V = 11309.73 \text{ cm}^3$$