



$x : y = 5 : 3$ and $y : z = 7 : 10$

Find $x : z$

$$\begin{aligned} x : y &= 5 : 3 \\ y : z &= 7 : 10 \\ \hline x : z &= 35 : 30 \end{aligned}$$

$$\begin{aligned} x : z &= 5 : 3 \\ 35 : 30 \\ \hline 7 : 6 \end{aligned}$$

$$\sqrt{8^2 + 15^2 + 144^2} = \sqrt{8^2 + 15^2} + \sqrt{w^2}$$

$$145 = 17 + \sqrt{w^2}$$

$$\sqrt{w^2} = 128$$

$$w = 128$$

w is a positive integer.

Find w .

Oscar is playing cricket.
When attempting to catch the ball, the probability Oscar is successful is $\frac{7}{10}$

During the game, Oscar attempts two catches.

Find the probability that Oscar is successful with both catches.

$$\frac{7}{10} \times \frac{7}{10} = \frac{49}{100}$$



Simplify $\frac{x^2 + 5x + 4}{x^2 + 4x + 3}$

$$\frac{(x+1)(x+4)}{(x+1)(x+3)}$$

$$\frac{x+4}{x+3}$$

Find where the line $7y = 3x + 10$ meets the x -axis.

$$y = 0$$

$$0 = 3x + 10$$

$$3x = -10$$

$$x = -\frac{10}{3}$$

$$\left(-\frac{10}{3}, 0\right)$$

$$\text{or } \left(-3\frac{1}{3}, 0\right)$$