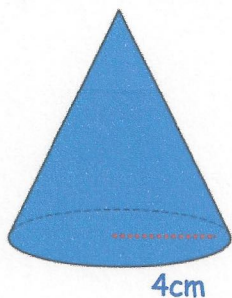


2nd January



Corbettmaths



$$V = \frac{1}{3}\pi r^2 h$$

$$V = \frac{1}{3} \times \pi \times 4^2 \times 10$$

Calculate the volume of the cone.

$$167.55 \text{ cm}^3$$

$$\sqrt{3^2 + 4^2 + 12^2} = \sqrt{3^2 + 4^2} + \sqrt{x^2}$$

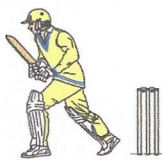
$$\sqrt{169} = \sqrt{25} + \sqrt{x^2}$$

$$13 = 5 + x$$

$$x = 8$$

x is a positive integer.
Find x .

Gary is playing cricket.
When attempting to catch the ball, the probability Gary is successful is $\frac{3}{4}$
During the game, Gary attempts two catches.



$$\frac{3}{4} \times \frac{3}{4} = \frac{9}{16}$$

Find the probability Gary is successful with both catches.

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.

$$y = 0$$

$$0 = 3x + 10$$

$$-10 = 3x$$

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

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

$$\text{or } (-3.333\dots, 0)$$