

19th January



Corbettmaths

Solve, to 1 decimal place.

$$x^3 + 2x = 150$$

5.2

Find the equation of the line passing through the points $(-3, -1)$ and $(1, -13)$

$$\text{gradient } \frac{\Delta y}{\Delta x} = \frac{-12}{4} = -3$$

$$y = -3x + c$$

sub in $(1, -13)$

$$-13 = -3 \times 1 + c$$

$$-10 = c$$

$$y = -3x - 10$$

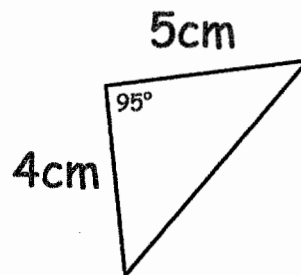
Calculate the missing side

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$a^2 = 5^2 + 4^2 - 2 \times 5 \times 4 \cos 95$$

$$a^2 = 41 - 40 \cos 95 = 44.48\dots$$

$$a = 6.67 \text{ cm}$$



Calculate the area

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$= \frac{1}{2} \times 4 \times 5 \times \sin 95$$

$$= 10 \sin 95$$

$$= 9.96 \text{ cm}^2 \text{ (3sf)}$$

Solve $5x^2 + 19x - 4 = 0$ using factorisation.

$$(5x - 1)(x + 4) = 0$$

$$x = \frac{1}{5} \quad x = -4$$