19th January

Corbettmaths

A scientist is carrying out an experiment to remove microplastics from water.
In an experiment 80,000 microplastics are added to a sample of water.

The number of microplastics, M, after t minutes is $M = 80000 \times 2^{-t}$

Calculate the number of microplastics in the water after 2 minutes.

After how many complete minutes does it take for the number of microplastics to fall below 100?

Solve

$sin^2 x = \frac{1}{4}$ for $0° \leq x \leq 360°$

A curve with equation $y = x^2 + 8x - 1$ meets the x-axis at the points A and B
The point C has coordinates (2, 5).

Find the area of triangle ABC