

28th December

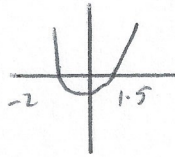


Corbettmaths

Solve

$$2x^2 + x - 6 > 0$$

$$(2x-3)(x+2)$$



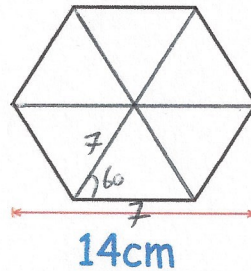
$$x < -2 \text{ or } x > 1.5$$

Find the area of the regular hexagon shown.

$$\frac{1}{2} \times 7 \times 7 \times \sin 60 = 21.21\dots$$

$$21.2176\dots \times 6$$

$$127.3057 \text{ cm}^2$$



The population of an island is decreasing exponentially.

Martin has begun to monitor the population each year.

Year 6 - Population 3000

Year 8 - Population 2000

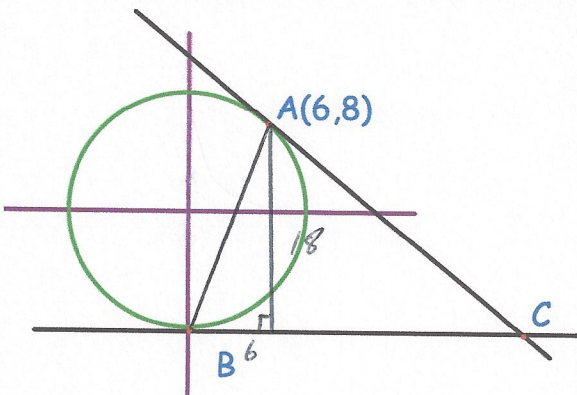
What was the population in Year 3?

$$3000 \times \frac{\sqrt{6}}{3} \times \frac{\sqrt{6}}{3} = 2000$$

$$3000 \div \left(\frac{\sqrt{6}}{3}\right)^3$$

$$5511.35\dots$$

$$5511$$



$$r = 10$$

Shown is a circle, centre O.

A and B are points on the circle.

AC and BC are tangents.

Explain why AC and BC are equal lengths

The tangents to a circle from the same point will be equal length

Calculate the distance AB

$$B(0, -10)$$

$$AB^2 = 6^2 + 18^2$$

$$AB^2 = 360$$

$$AB = 18.97$$