18th May

Corbettmaths

The curve $y = x^2 + 4x - 12$ is reflected in the y-axis.

Write down the equation of the reflected curve.

$y = f(-x)$

$y = (-x)^2 + 4(-x) - 12$

$y = x^2 - 4x - 12$

Prove $(2n + 2)^2 - (2n + 1)$ is always odd.

$4n^2 + 8n + 4 - (2n + 1)$

$4n^2 + 6n + 3$

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even + odd = odd

Find the equation of the line that is perpendicular to $4x + y = 8$ and passes through the point (1, 5)

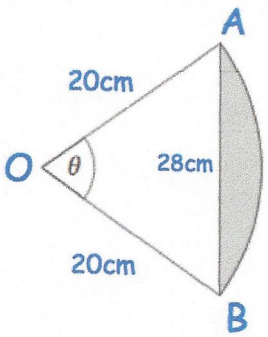
$y = -4x + 8$

$y = \frac{1}{4}x + c$

$5 = \frac{1}{4} + c$

$c = 4.75$

$y = -\frac{1}{4}x + 4.75$



The diagram shows a triangle OAB and the arc AB of a circle whose centre is O and whose radius is 20cm.

Sector : 310.145cm^2

triangle : 199.9597cm^2

Find the size of the angle θ.

$\cos\theta = \frac{20^2 + 20^2 - 28^2}{2 \times 20 \times 20}$

$88.85°$

Find the area of the shaded segment to the nearest cm^2.

110cm^2