

23rd January

Higher Plus 5-a-day



Corbettmaths

Find the minimum point of the graph
 $y = x^2 - 6x + 7$

$$(x-3)^2 - 9 + 7$$

$$(x-3)^2 - 2$$

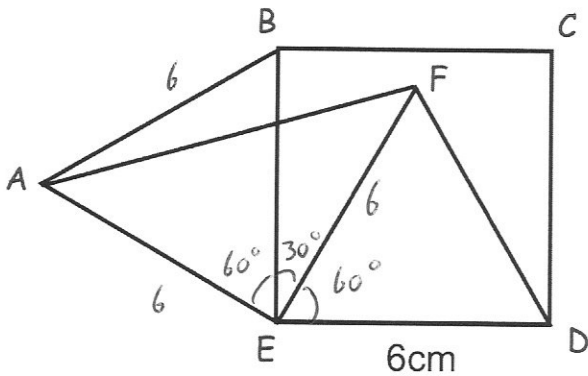
$$(3, -2)$$

The set of values for x that satisfies a quadratic inequality is
 $x < -0.5$ or $x > 1.5$

Write down a possible quadratic inequality.

$$(2x+1)(2x-3) > 0$$

$$4x^2 - 4x - 3 > 0$$



BCDE is a square
 DFE and ABE are equilateral triangles

Find the length of AF

$$AF^2 = 6^2 + 6^2$$

$$AF^2 = 36 + 36$$

$$AF = \sqrt{72}$$

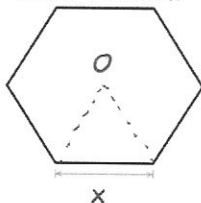
$$= 6\sqrt{2} \text{ cm}$$

$$(8.48528... \text{ cm})$$

Below is a regular hexagon with an area of 100cm^2

Area = 100cm^2

$$100 \div 6 = 16.\bar{6}$$



Find x

$$\frac{1}{2} x^2 \sin 60 = 16.\bar{6}$$

$$x^2 = \frac{33.\bar{3}}{\sin 60}$$

$$x^2 = 38.49...$$

$$x = 6.2 \text{ cm}$$