

**3rd November**

Corbettmaths

Expand and simplify fully

$$(x - 9)(x - 3)(x - 2)$$

Solve  $3\cos\theta = 1$  for  $0^\circ \leq \theta \leq 360^\circ$ 

A farmer creates a rectangular pen for his chickens.



x

The width of the field is  $x$  metres.

The perimeter of the field is 120 metres.

Show that the length of the rectangle is  $60 - x$  metres

Show that the area of the field is  $A = 60x - x^2$

Use differentiation to find the value of  $x$  for which  $A$  is a maximum