



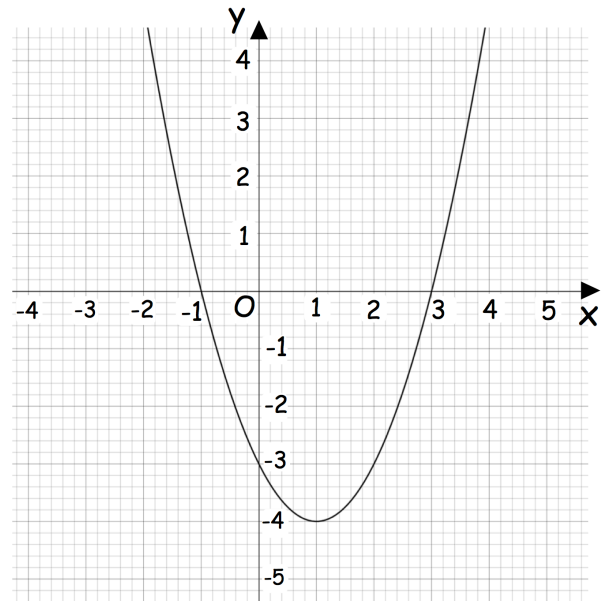
A circle has equation

$$x^2 + y^2 = \frac{9}{4}$$

Write down the length of its radius

Shown is part of  $y = x^2 - 2x - 3$

By drawing an appropriate straight line, use your graph to find estimates for the solutions of  $x^2 - 3x - 1 = 0$



There are  $x$  apples in a crate.  
4 of the apples are bad.

Fiona chooses two apples from the crate, without replacement.  
The probability she selects two bad apples is  $\frac{1}{11}$

Prove

$$x^2 - x - 132 = 0$$

Find  $x$ , the number of apples in the crate.