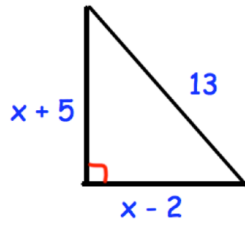


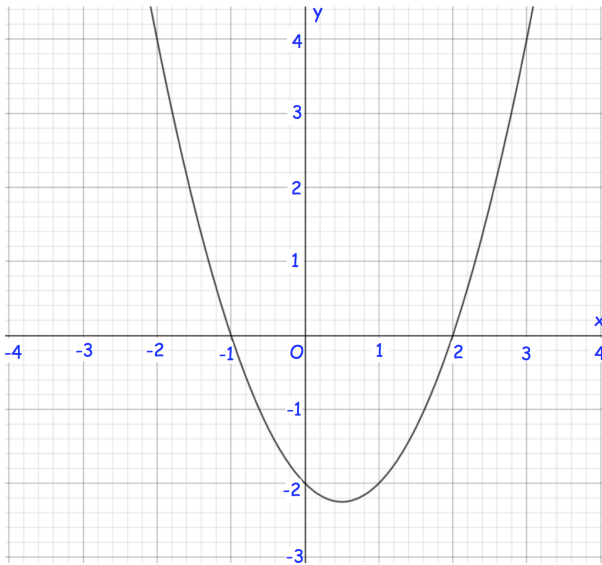
21st August



Corbettmaths



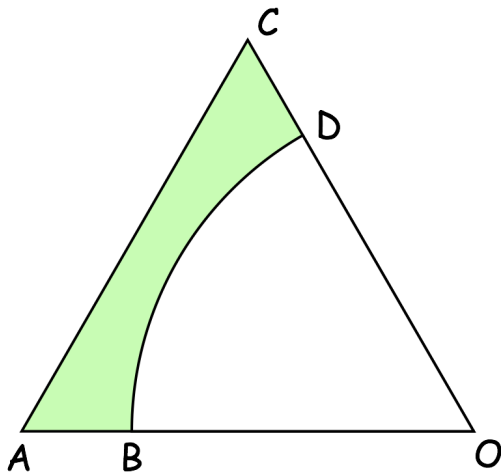
Find  $x$



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

Calculate an estimate for the gradient of the graph  $y = x^2 - x - 2$  at the point where  $x = 1$

Shown is  $y = x^2 - x - 2$



AOC is an equilateral triangle of side length 14cm.  
 OBD is a sector of a circle with centre  $O$  and radius 11cm.

Calculate the area of the shaded region as a percentage of the area of triangle AOC.  
 Give your answer correct to 3 significant figures.