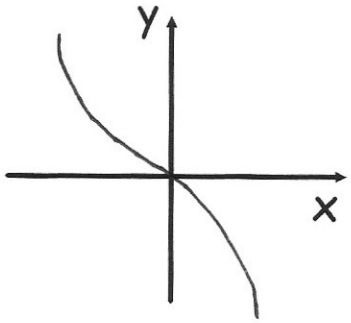
22nd October **Higher Plus 5-a-day**

Corbettmaths

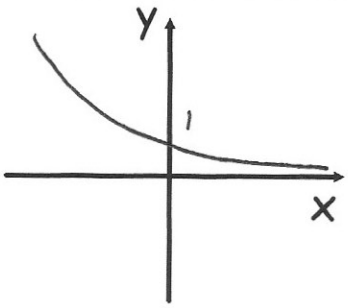
Sketch

$y = -x^3$



Sketch

$y = \left(\frac{1}{2}\right)^x$



Factorise fully

$y - 4y^3$

$y(1-4y^2)$

$y(1-2y)(1+2y)$

Solve, giving your answers to one decimal place.

$\frac{6}{x-1} = \frac{5-2x}{x-3}$

$6(x-3) = (5-2x)(x-1)$

$6x-18 = 5x-5-2x^2+2x$

$6x-18 = -2x^2+7x-5$

$0 = 2x^2 - x - 13$ $a=2$ $b=-1$ $c=-13$

$x = \frac{1 \pm \sqrt{105}}{4}$

$x =$ 2.8 or $x =$ −2.3

The curve $y = x^2 - 6x + 1$ has a line of symmetry.

Write down the equation of the line of symmetry

$y = (x-3)^2 - 9 + 1$

$y = (x-3)^2 - 8$

$x = 3$

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