28th January **Higher 5-a-day**

Corbettmaths

Factorise $2y^2 + 5y + 3$

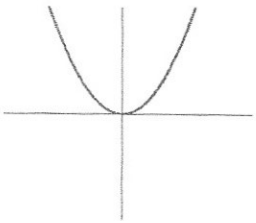
$(2y + 3)(y + 1)$

Find the equation of the straight line passing through the point (0, 6) which is perpendicular to the line

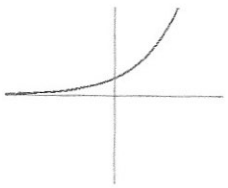
$y = 3x + 1$

$y = -\frac{1}{3}x + 6$

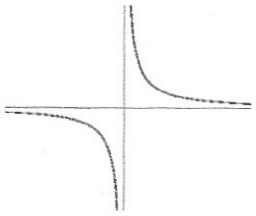
Graph A



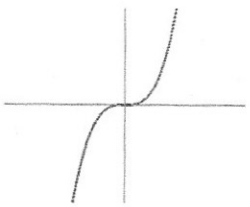
Graph B



Graph C



Graph D



$y = x^2$ is graph **A**

$y = x^3$ is graph D

$y = 2^x$ is graph B

$y = \frac{1}{x}$ is graph C

Mersenne primes are prime numbers that can be written in the form $2^n - 1$ where n is a whole number.

If n = 5, is $2^5 - 1$ a Mersenne prime?

$32 - 1 = 31$ Yes

If n = 8, is $2^8 - 1$ a Mersenne prime?

$256 - 1 = 255$ No