Name: _____ 5-a-day Further Maths

16th May

Corbettmaths

The straight line l_1 has an equation
$4x + 2y + 1 = 0$
The straight line l_2 has an equation
$y = 7 - x$
The lines l_1 and l_2 intersect at the point A

Work out the coordinates of A

Using the digits below only once

6 1 9 8 7 7

How many 4-digit even numbers less than 5000 can be made?

The first two term terms in a linear sequence are $2 + 3\sqrt{6}$ and $\sqrt{6}$

What is the fourth term in the sequence?

$f(x) = 2x^3 - 2x^2 + 30x - 5$

Show f(x) is an increasing function for all values of x.

The coefficient of the x^3 term in the expansion of $(2x + a)^5$ is 2000.

Find the possible values of a