Name: _____ 5-a-day Further Maths

25th January

Corbettmaths

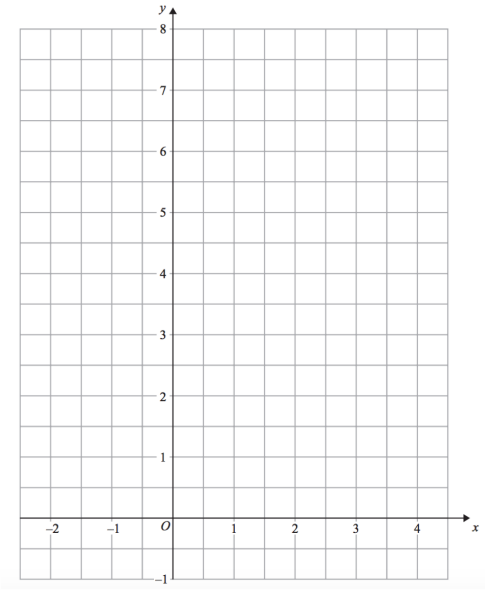
A function f(x) is defined as

$f(x) = x + 3 \qquad -2 \leq x < -1$

$= 2 \qquad -1 \leq x < 1$

$= 2x \qquad 1 \leq x \leq 4$

Draw the graph of $y = f(x)$



The line passing through $(-3, -6)$ and $(g, -5g)$ has a gradient of –3

Find g.

The curve y = f(x) has two stationary points.

f(0) = 1 f(3) = 8 and f(7) = 2

x < 3	x = 3	3 < x < 7	x = 7	x > 7
$\frac{dy}{dx} > 0$	$\frac{dy}{dx} = 0$	$\frac{dy}{dx} < 0$	$\frac{dy}{dx} = 0$	$\frac{dy}{dx} > 0$

Sketch the curve.
Label the coordinates of each stationary point