Mathematics

Gradient 1 Downloadable Resource

Mr Maseko

Try this

Fill in the missing ordinates.

What's the same and what's different?

Name each of the students' graphs

(0,   )
(1,   )
(2,   )
(3,   )
(4,   )
(5,   )

(0,   )
(1,   )
(2,   )
(3,   )
(4,   )
(5,   )

(0,   )
(1,   )
(2,   )
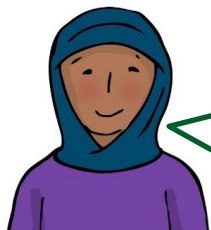(3,   )
(4,   )
(5,   )

In my graph, the y-ordinate is double the x-ordinate

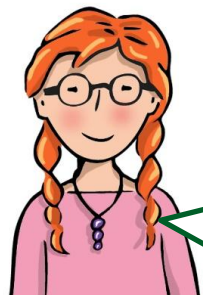In my graph, the y-ordinate is triple the x-ordinate

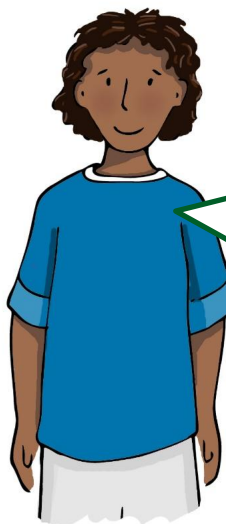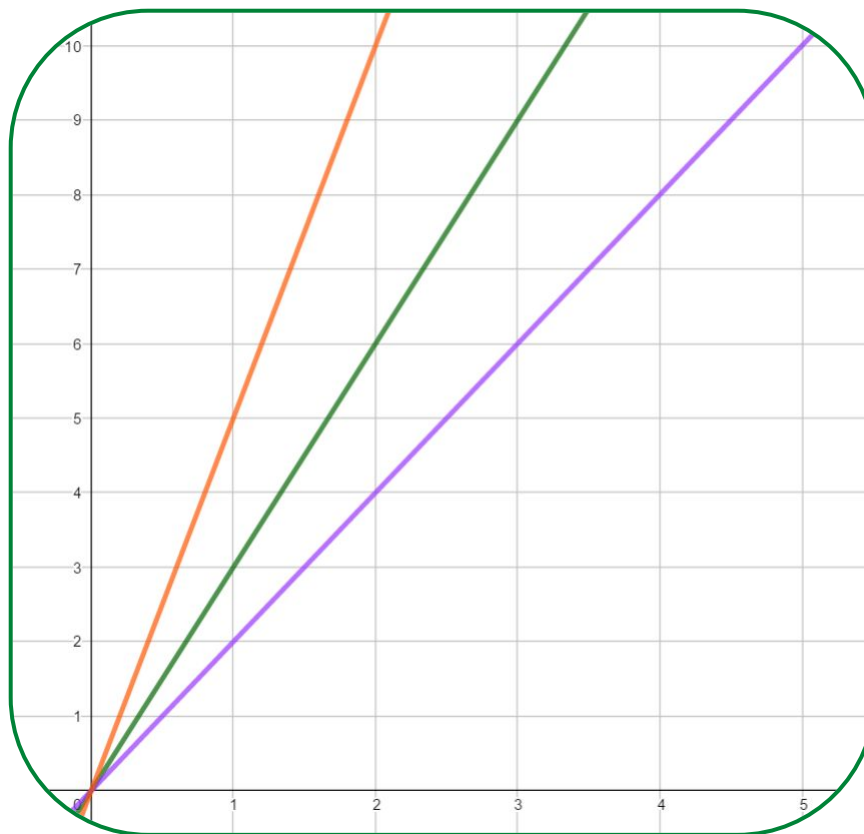In my graph, the y-ordinate is 5 times the x-ordinate

Connect

In my graph, y = **2**x

In my graph, y = **3**x

In my graph, y = **5**x

On the orange graph, everytime we move up 1 in the x-direction we move up ___ in the y-direction. So this graph has a gradient of ___.

On the green graph, everytime we move up 1 in the x-direction we move up ___ in the y-direction. So this graph has a gradient of ___.

In linear graphs, the **coefficient** of x determines how steep it is. This is referred to as the **gradient.**
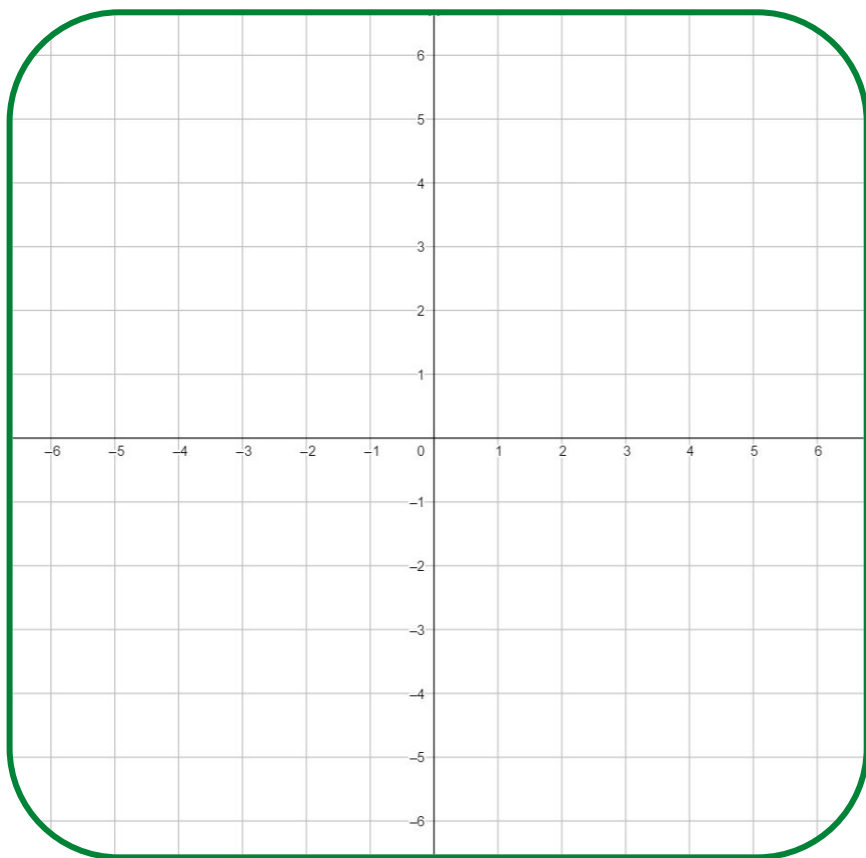
Connect

In linear graphs, the **coefficient** of x determines how steep it is. This is referred to as the **gradient.**

What would happen if every time we move up 1 in the x-direction we move down 2 in the y-direction?
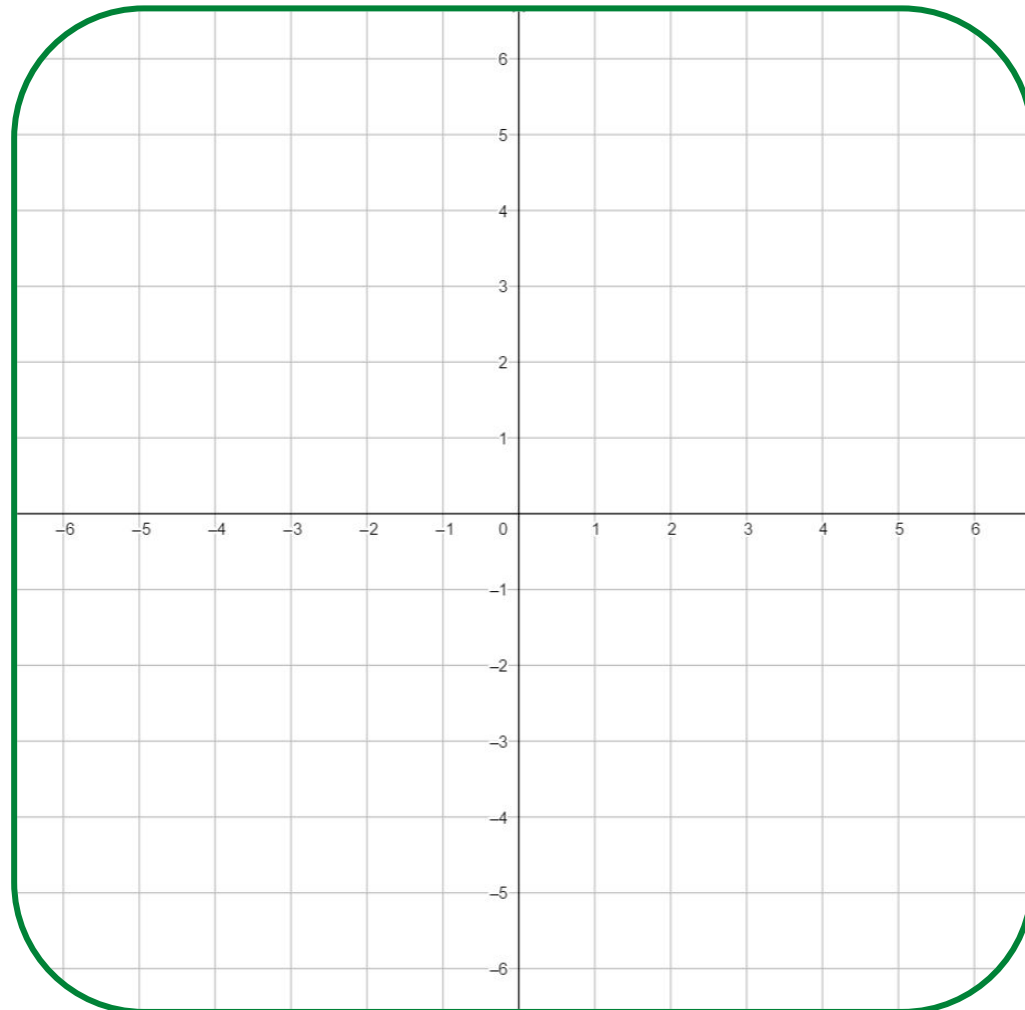
Independent task

1) Plot the following lines on the coordinate grid and state the gradient of each line

Line 1: has the coordinates, (-3,-3), (1,1), (1,4),

Line 2 has the coordinates, (-1-4), (0,-1), (2,5)

Line 3 has the coordinates, (-2,5), (0,1), (2,-3)

2) A linear graph has a gradient of 3 and goes through (3,7) and (4,y). Find y.

Explore

1 Find the gradient of each of these lines

2 List some linear graphs that would have the same gradient one of these graphs