**How to find the gradient of a line?**
On the coordinate plane, the slant of a line is called the slope / **gradient**. Gradient is the ratio of the change in the y-value over the change in the x-value, also called **rise over run**.

Given any two points on a line, you can calculate the **gradient** of the line by using this formula: $\frac{y\_{2-y\_{1}}}{x\_{2-x\_{1}}}$



For example: Given two points, A= (-3 ; –4) and Q = (4 ; 3), on the line we can calculate the gradient of the line.

**Solution:** Gradient $= \frac{3-(-4)}{4-(-3)}=\frac{3+4}{4+3}=1$

**What is a Negative Gradient?**

Let's look at a line that has a negative gradient.



For example: Consider the two points, F(-3 ; 9) and E(2, 5) on the line. What would be the gradient of the line?

**Solution:** Gradient = $\frac{5-9}{2-(-3)}=\frac{-4}{5}$

**Exercise 2**

Calculate the **gradients** of the straight lines joining the following points:

1. A(1;2) and B(4;2)
2. C(-1;2) and D(4;-2)