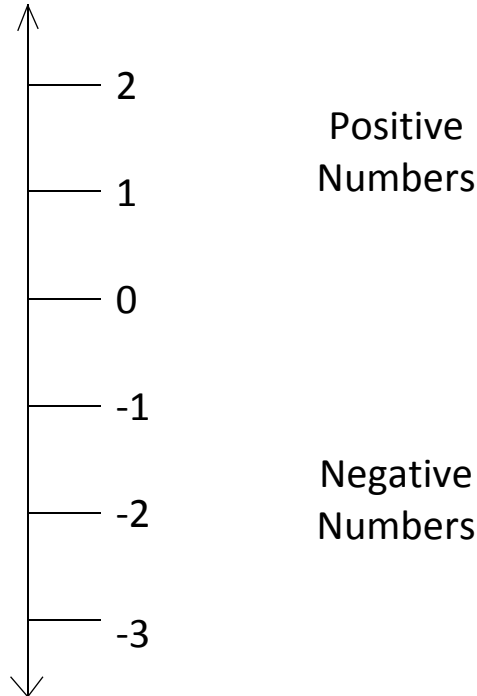


S1 Topic 8: Integers (Positive and Negative whole numbers)

1) Understand how the number line extends below zero



2) Be able to order integers

27 is greater than 18 but -18 is greater than -27

23 is less than 50 but -50 is less than -23

3) Add or subtract integers in context

Last night the temperature was -5°C . It has risen by 8°C . What is the temperature now?

$$-5 + 8 = 3^{\circ}\text{C}$$

A submarine was cruising 70m below the surface of the sea. It dived down 30m. How far below the surface of the sea is it now?

$$-70 - 30 = -100\text{m}$$

4) Add or subtract integers (perhaps by imagining moving up or down the number line).

$$-10 + 5 = -5$$

$$-10 + 13 = 3$$

$$-10 - 8 = -18$$

$$3 - 12 = -9$$

5) Add or subtract negative integers

$$-7 - (-8) = -7 + 8 = 1$$

$$9 + (-8) = 9 - 8 = 1$$

$$0 - (-10) = 0 + 10 = 10$$

$$3 + (-11) = 3 - 11 = -8$$

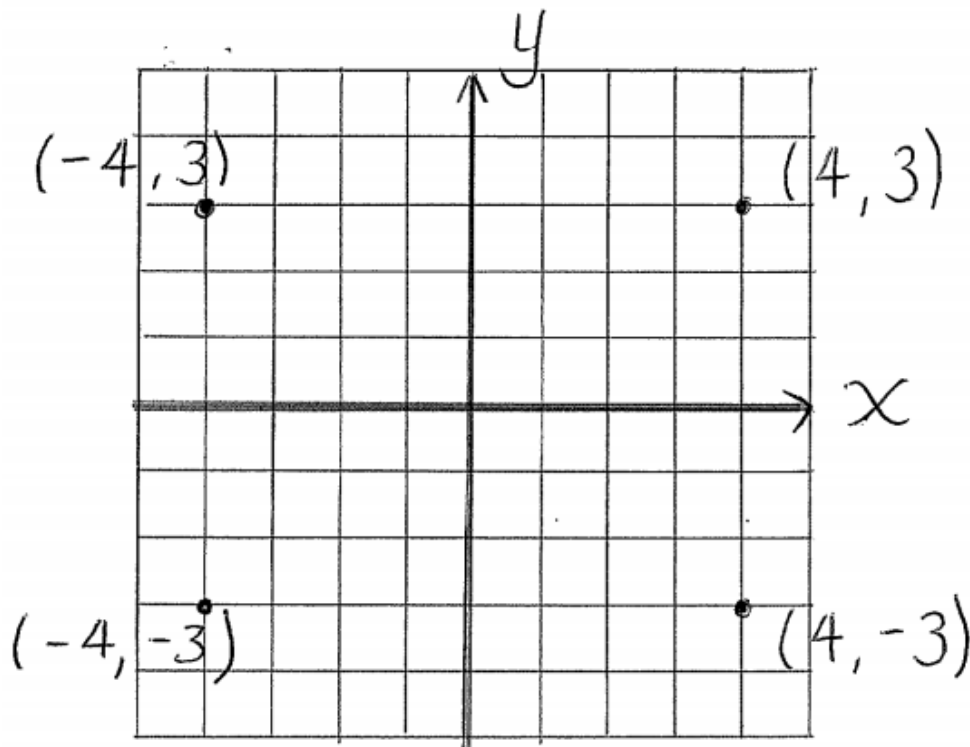
6) Use a mixture of negative and positive coordinates when plotting points.

(4, 3) means four to the right and three up from the origin

(-4, 3) means four to the left and three up from the origin

(4, -3) means four to the right and three down from the origin

(-4, -3) means four to the left then three down from the origin



7) Solve problems involving integers

Yesterday it was -3°C in Dundee but 2°C in Glasgow. Today it is 4°C warmer in Dundee but 5°C colder in Glasgow. Which city is colder, and by how much?

**REMEMBER TO SHOW ALL YOUR WORKING
AND EXPLAIN YOUR ANSWER FULLY!**