



# Negative Numbers

## Study Development Quick Guide

### Putting negative numbers in size order

Negative numbers go the other way on a number line to positive numbers, meaning that the 'larger' the number part is, the lower its value when it's negative. Think of temperatures:  $-10^{\circ}\text{C}$  is a lower and colder temperature than  $-1^{\circ}\text{C}$ , so if we were asked to put them in order from lowest temperature to highest, we would put  $-10^{\circ}\text{C}$  first.

### Adding

$$a + -b = a - b$$

### Subtracting

$$a - -b = a + b$$

### Multiplying and dividing

A general rule for both multiplying and dividing is:

- If the signs match (i.e. if both numbers are positive or both numbers are negative) then the answer will be positive.
- If the signs don't match (i.e. there is one positive and one negative number) then the answer will be negative.

$$-a \times -b = ab$$

$$a \times -b = -ab$$

$$-a \div -b = a \div b$$

$$-a \div b = -(a \div b)$$

$$a \div -b = -(a \div b)$$



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