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°C is a lower and colder temperature than -1°C, so if we were asked to put them in order from lowest temperature to highest, we would put -10°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.

$$- a ×-b = ab$$

$$a ×- b = -ab$$

$$-a÷-b=a ÷b$$

$$-a÷b=-\left(a÷b\right)$$

$$a÷-b=-\left(a÷b\right)$$

**Support**: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.

* Book a tutorial or join a workshop on the [Study Development tutorial and workshop webpage](https://www.yorksj.ac.uk/students/study-skills/study-development-tutorials/) or search ‘YSJ study development tutorials.’
* Access our Study Success resources on the [Study Success webpage](https://www.yorksj.ac.uk/students/study-skills/study-success/) or search ‘YSJ study success.’