Set Builder Notation

Recap from GCSE:

* We use curly braces to list the values in a set, e.g.
* If and are sets then is the **intersection** of and , giving a set which has the elements in **and** .
* is the **union** of and , giving a set which has the elements in **or** in .
* is the empty set, i.e. the set with nothing in it.
* Sets can also be infinitely large. is the set of natural numbers (all positive integers), is the set of all integers (including negative numbers and 0) and is the set of all real numbers (including all possible decimals).
* We write to mean “ is a member of the set A”. So
* ould mean “ is a real number”.

**Examples:**

Example

Examples:

1.

2.

3.

Solving Inequalities

Linear inequalities Examples

2.

1.

3.

Combining Inequalities

When combining inequalities always draw a number line to help!

Example

Example:

If and , what is the combined solution set?