The Real Numbers

The Natural Numbers <i>N</i> These are the counting numbers.	$N = \{1, 2, 3, 4, 5,\}$
The Whole Numbers W These are the natural numbers, together with the number 0.	$W = \{0, 1, 2, 3, 4, 5,\}$
The Integers Z These are the whole numbers together with the opposites of the natural numbers.	$Z = {, -3, -2, -1, 0, 1, 2, 3,}$
The Rational Numbers <i>Q</i> These are the numbers that can be written as a ratio of two integers.	$Q = \left\{ \frac{a}{b} \mid \text{a and b are integers, with b} \neq 0 \right\}$ Examples: $\frac{3}{4}, -\frac{5}{2}, 0.35, 6, 0, 0.\overline{3}$
The Irrational Numbers <i>I</i> These are the numbers that cannot be written as a ratio of two integers.	Examples: $\sqrt{5}$, $\sqrt{8}$, π

The Real Numbers *R*

The Real Numbers include all the Rational Numbers and all the Irrational Numbers together.

They consist of all the numbers on the number line. **Rational Numbers Irrational Numbers** Integers Whole Numbers **Natural Numbers**