

# Math vocabulary

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# Vocabulary

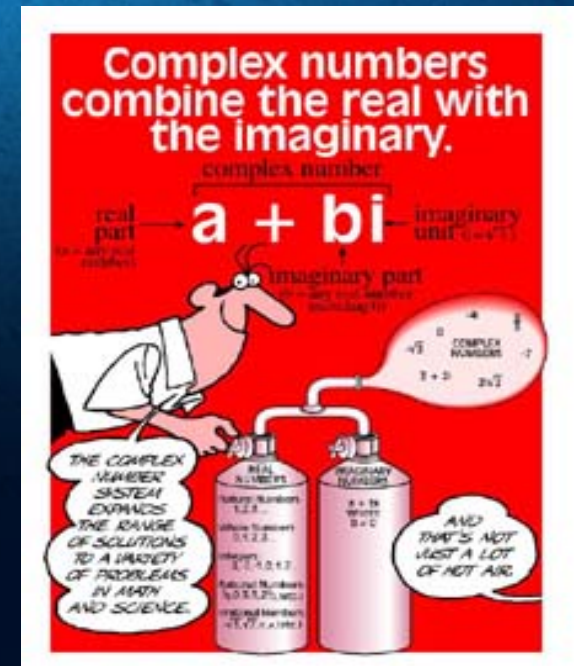
## Rational Numbers

Number that can be expressed by a ratio of two integers

$$\frac{5}{7} = \frac{1}{2} + \frac{1}{6} + \frac{1}{21}$$

## Complex Numbers

Mathematical expression  $(a + bi)$  in which  $a$  and  $b$  are real numbers and  $i^2$  is  $-1$



# Math vocabulary

Irrational numbers

A number that cannot be exactly expressed by a ratio of two integers



imaginary numbers

A complex number having its real part equal to zero.

The image shows the equation  $i = \sqrt{-1}$  in a stylized font. The letter 'i' is blue, the equals sign is orange, and the square root symbol and '-1' are green. The entire equation is centered within a white rectangular box.



# Math Vocabulary

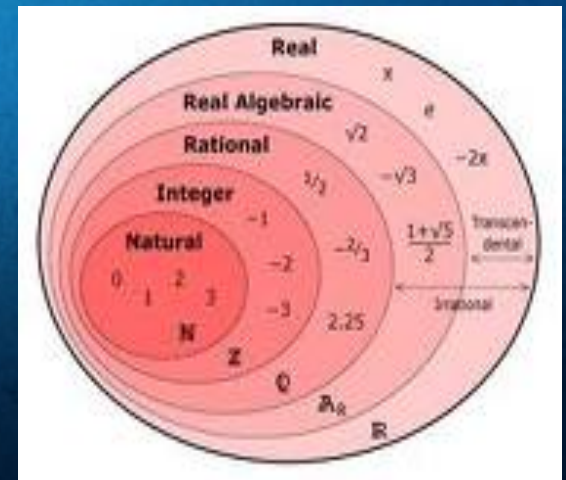
whole numbers

One of the positive integers or zero.

0, 1, 2 ....

real numbers

A number that can be written as a terminating or non-terminating decimal, can be written as rational or irrational.



# Math Vocabulary

counting numbers

Whole numbers.

1,2,3.....

integers

one of the positive or  
negative numbers

5,6...

# Math Vocabulary

polynomial      monomial or sum of monomials

$$\begin{array}{l} x^2 + 7x - 3 \\ 4a^3 + 7a^2 + a \\ nm^2 - m \\ 3x - 2 \\ 5 \end{array}$$

monomial      constants and variables  
multiplied together

$$8x$$



# Math Vocabulary

Zero and One as exponents

If one was the exponent the base doesn't change. If zero is the exponent the power is one

$$b^1 = b \quad 39^1 = 39$$

$$b^0 = 1 \quad 39^0 = 1$$

Negative exponents

If the exponent is negative take the reciprocal of the power.

$$b^{-1} = 1/b^1 \text{ or}$$

$$1/b^{-m} = b^m$$

# Math Vocabulary

Power to a power

Keep the base and  
multiply the exponent

$$(b^n)^m = b^{n*m}$$

Product of powers

Keep the base add the  
exponent

$$b^n * b^m = b^{n+m}$$



# Math Vocabulary

Quotient of  
powers

Keep the base  
subtract the  
exponent

$$b^n/b^m=b^{n-m}$$

Roots as powers

We can write the  
inverse of an  
exponent as  
multiplicative  
inverse of the power



# Math Vocabulary

Like Term

Term with the same variable and power.

$$2x + 5x + 9 = 30$$

$$7x + 9 = 30$$

$$-9 = -9$$

$$7x = 21$$

$$\frac{7x}{7} = \frac{21}{7}$$

$$x = 3$$

Variable

A symbol to represent a value that changes.

$$x^2 x^3 = x^{2+3}$$

$$= x^5$$

# Math Vocabulary

## Additive Identity

A number you can  
add to any number to  
make it stay the same

0

## Multiplicative Identity

The number that  
you can multiply by  
any number to make it  
stay the same

1





# Math Vocabulary

## Additive Inverse

A number that you add to a number to take it back to the identity

$$30 + -30 = 0$$

## Multiplicative Inverse

A number that you multiply to take it back to the identity

$$30 * 1/30 = 0$$

# Math Vocabulary

constant      a number that doesn't change



coefficient      a number multiplied by a  
variable

$72a$