

**Perfect
Squares**

Percent

Ratio

**Equivalent
Relationships**

**Absolute
Value**

**Exponential
Form**

Per hundred

$$56\% = \frac{56}{100} = \frac{14}{25} = 0.56$$

$$0^2 = 0 \cdot 0 = \mathbf{0}$$

$$1^2 = 1 \cdot 1 = \mathbf{1}$$

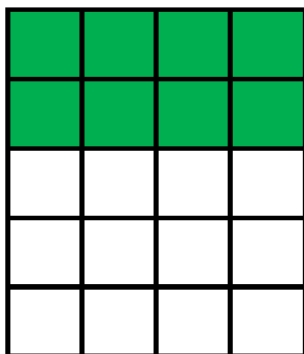
$$2^2 = 2 \cdot 2 = \mathbf{4}$$

$$3^2 = 3 \cdot 3 = \mathbf{9}$$

$$4^2 = 4 \cdot 4 = \mathbf{16}$$

$$5^2 = 5 \cdot 5 = \mathbf{25}$$

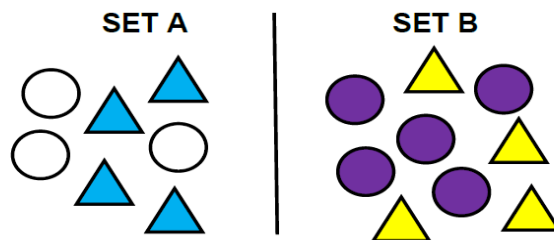
$$\sqrt{16} = \sqrt{4 \cdot 4} = 4$$



Fraction: $\frac{2}{5}$

Decimal: 0.4

Percent: 40%



▲ to ○	4 to 3
▲ to all of set A	$\frac{4}{7}$
○ to ●	3:5
set B to set A	9 to 7 or 9:7

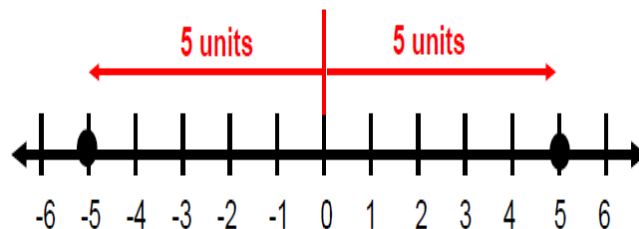
exponent

$$2^3 = 2 \cdot 2 \cdot 2$$

base

$$n^4 = \underbrace{n \cdot n \cdot n \cdot n}_{\text{factors}}$$

$$|5| = 5 \quad |-5| = 5$$



**Irrational
Numbers**

**Fraction
Division**

Real Numbers

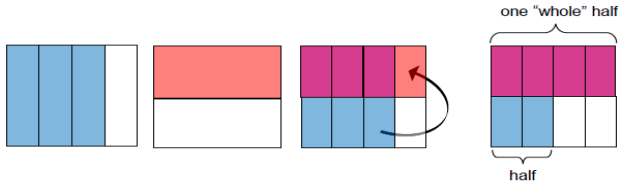
**Whole
Numbers**

**Fraction
Multiplication**

**Rational
Numbers**

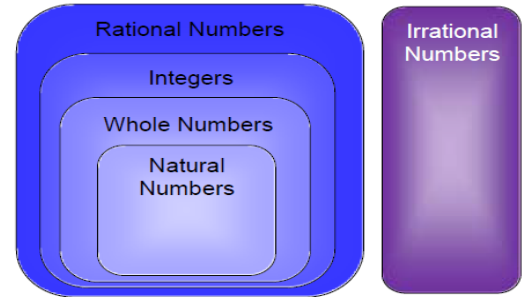
$$\frac{3}{4} \div \frac{1}{2}$$

How many halves are in three-fourths?



There are $1\frac{1}{2}$ halves in three-fourths.

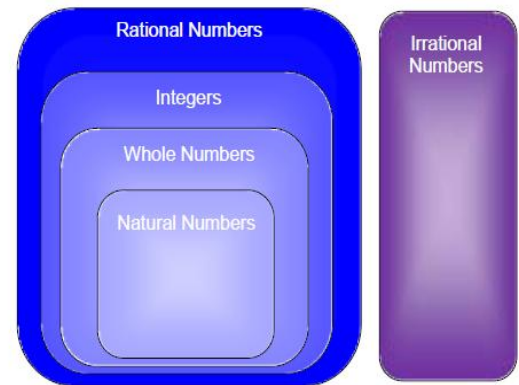
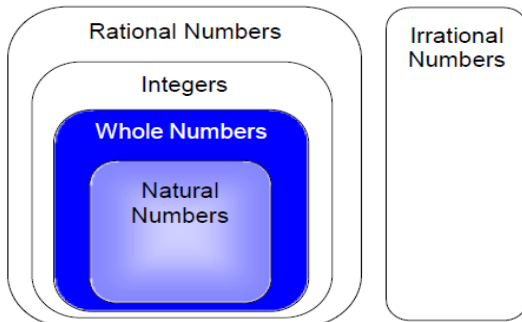
$$\frac{3}{4} \div \frac{1}{2} = 1\frac{1}{2}$$



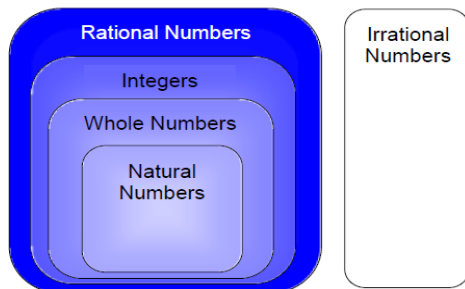
A number that cannot be expressed as the quotient of two integers

$$\sqrt{7} \quad \pi \quad -0.23223222322223\dots$$

The set of numbers
0, 1, 2, 3, 4...



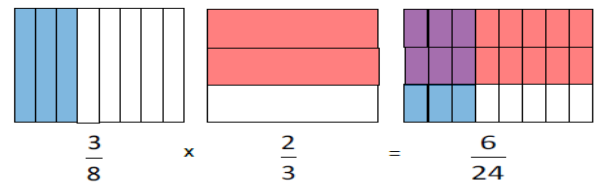
The set of all rational and irrational numbers



A number that can be written as the quotient of two integers

$$2\frac{3}{5} \quad -5 \quad 0.3 \quad \sqrt{16} \quad \frac{13}{7}$$

How much is $\frac{3}{8}$ of $\frac{2}{3}$?



$$\frac{3}{8} \times \frac{2}{3} = \frac{6}{24} = \frac{1}{4}$$

**Natural
Numbers**

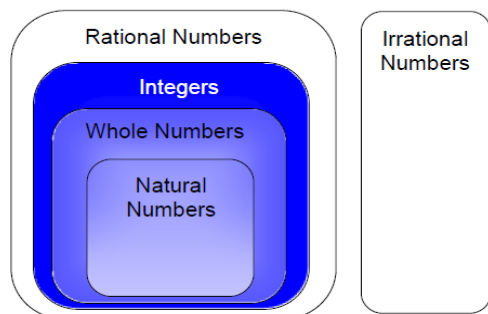
Integers

**Comparing
Integers**

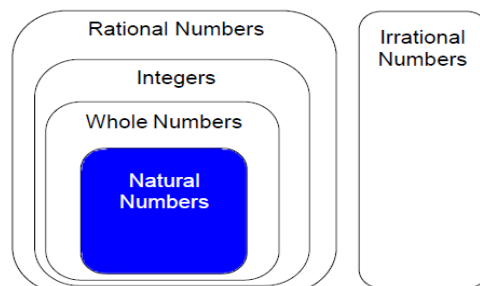
**Powers of
Ten**

**Scientific
Notation**

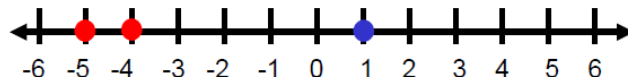
The set of numbers
...-3, -2, -1, 0, 1, 2, 3...



The set of numbers
1, 2, 3, 4...



	Meaning	Value
10^4	$10 \cdot 10 \cdot 10 \cdot 10$	10,000
10^3	$10 \cdot 10 \cdot 10$	1000
10^2	$10 \cdot 10$	100
10^1	10	10
10^0	1	1
10^{-1}	$\frac{1}{10}$	0.1
10^{-2}	$\frac{1}{10} \cdot \frac{1}{10}$	$\frac{1}{100} = 0.01$
10^{-3}	$\frac{1}{10} \cdot \frac{1}{10} \cdot \frac{1}{10}$	$\frac{1}{1000} = 0.001$
10^{-4}	$\frac{1}{10} \cdot \frac{1}{10} \cdot \frac{1}{10} \cdot \frac{1}{10}$	$\frac{1}{10,000} = 0.0001$



$$-5 < 1 \text{ or } 1 > -5$$

$$-4 > -5 \text{ or } -5 < -4$$

$$a \times 10^n$$

a = number greater than or
equal to 1 and less than 10

n = integer

$$17,500,000 = 1.75 \times 10^7$$

$$0.0000026 = 2.6 \times 10^{-6}$$