

Rational Numbers

Number Systems

- We use many different types of numbers in math. You've seen most of them.
- Natural (or Counting) Numbers – $1, 2, 3, 4, 5, \dots$
- Whole Numbers – $0, 1, 2, 3, 4, 5, \dots$
- Integers - $\dots -4, -3, -2, -1, 0, 1, 2, 3, 4, \dots$

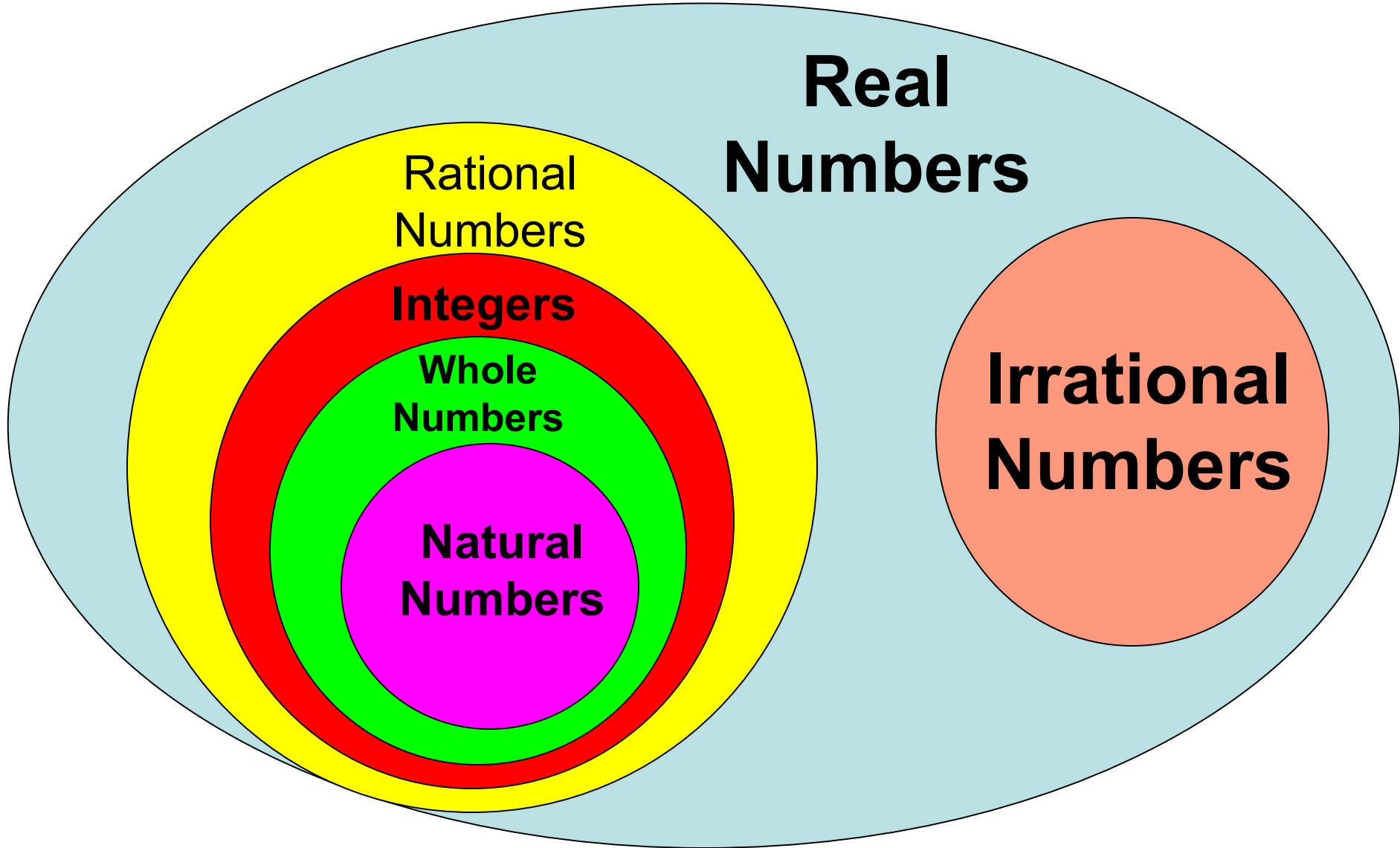
Definitions

- **Rational Number-** a number that can be written in the form a/b , where a and b are real numbers, and $b \neq 0$.
 - **Its any number that can be written as a fraction**
 - **Or—any number that is either a repeating decimal (0.3333333333...) or a terminating decimal (1.25)**

Definition

- **Irrational Number** – a number that **cannot** be written as a fraction.
- These sets of numbers make up the system of numbers known as the **Real Numbers**.

Diagram of Number Systems



Rational Numbers

- Identify if the number is rational:

– 4

– -5

– $\frac{2}{3}$

– π

– $\frac{5}{8}$

– $\sqrt{4}$

– $\sqrt{5}$

Rational Numbers

- Identify if the number is rational

– 0

– 1/3

– $\sqrt{36}$

– $\sqrt{24}$

Number Systems

- Identify the number systems that each number is a part of:

$\frac{1}{2}$

4.3

5

π

$\sqrt{9}$

$\sqrt{19}$

Number Systems

- Name the number systems each number belongs to:
- 3.14
- 2.132321254...
- $\frac{22}{7}$