

1.1 continue

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$\mathbb{N}$   $\rightarrow$  Natural Numbers  
 $\hookrightarrow \{1, 2, 3, 4, \dots\}$

$\mathbb{W}$   $\rightarrow$  Whole Numbers  
 $\hookrightarrow \{0, 1, 2, 3, \dots\}$

$\mathbb{Z}$   $\rightarrow$  Integers  
 $\hookrightarrow \{\dots -2, -1, 0, 1, 2, \dots\}$

$\mathbb{R}$   $\rightarrow$  Real Numbers  
 $\hookrightarrow \{\dots -2 \dots -1 \dots 0 \dots 1 \dots 2 \dots\}$

$\mathbb{Q}$   $\rightarrow$  Rational Numbers  
 $\hookrightarrow \left\{ \frac{\mathbb{Z}}{\mathbb{Z}} \right\}$

# Rational or Irrational

All  $\mathbb{Z}$   
are  $\mathbb{Q}$

$$\frac{1}{2} \rightarrow \text{Q}$$

$$\frac{-42}{1} \rightarrow \text{Q}$$

$$\frac{17}{19} \rightarrow \text{Q}$$

No +

$$\pi \rightarrow \text{Q}$$

because the  
decimal Never  
Ends.

**(not rounded)**

**An IRRATIONAL number is a number that cannot be expressed as an exact ratio of two integers.**

**Swish design by Stephen Toner**

**Replay**

**For the complete song and lyrics, click on the authors' link below.**

**Words and Music by Ken Ferrier and Antoni Chan. Used with permission.**

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When is it true?

the Solution(s) can only come from  $\mathbb{N}$

$$x + 3 = 12$$

$$\underline{\underline{\{9\}}}$$

$$x + 3 > 12$$

$$\underline{\underline{\{10, 11, 12, \dots\}}}$$

# Domains w/o Numbers

- 50 states

- Classes

- County in a State

- Cloths

- Shoes

- Cars

- Animals

- Names

O.T.L.

② pg 4: Exp. 1-1ball