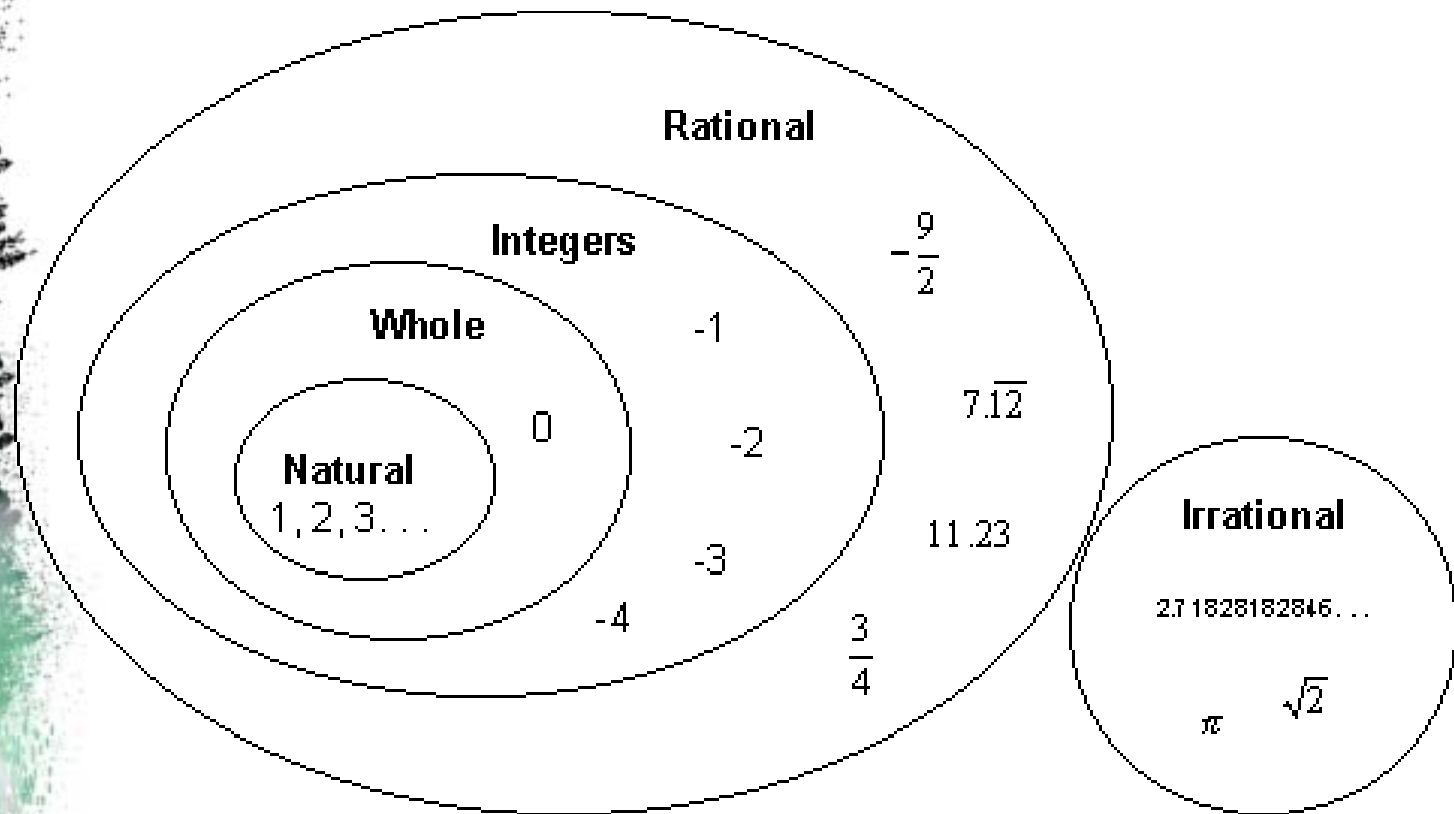


## 5.4 Terminating and Repeating Decimals

***Objective: To convert fractions to decimals & decimals to fractions***



# Rational Numbers



**Terminating Decimal** – When dividing the repeating digit is 0. Ex. 1.2 or 0.4

**Repeating Decimal** – The decimal form of a rational number (numbers repeat).

Use bar notation! Ex.  $3.\overline{45}$  or  $0.\overline{1}$

# Converting Fractions and Decimals

Fraction

$$-\frac{2}{9}$$

means -2 9

0.222

$$\begin{array}{r} 9 \overline{) 2.000} \\ \underline{-18} \phantom{00} \\ 20 \phantom{0} \\ \underline{-18} \phantom{0} \\ 20 \\ \underline{-18} \\ 2 \end{array}$$

Decimal

$$-0.\overline{2}$$

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$$\frac{-35}{100} \frac{5}{5} = -\frac{7}{20} \text{ or } \frac{-7}{20} \text{ or } \frac{7}{-20}$$

-0.35

Say it correctly!

## Practice

1) Convert  $-\frac{7}{8}$  to a decimal

-0.875

2) Convert  $\frac{6}{11}$  to a decimal

0. $\overline{54}$

3) Convert  $-2\frac{3}{7}$  to a decimal

- $\overline{2.428571}$