

## 3-2 Rational Numbers

$$C \text{ or } N \{1, 2, 3, 4, \dots\}$$

$$W \{0, 1, 2, 3, 4, \dots\}$$

$$I \{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$$

Rational Numbers - any number that can be written as a fraction.

$$0.87 \quad -23 \quad \frac{2}{3} \quad -2.\overline{56} \quad 1\frac{1}{2}$$

$$\begin{array}{c} \text{add} \\ \text{+} \\ \text{6} \frac{1}{6} \\ \text{multiply} \end{array} \quad 6 \cdot 6 = 36 + 1 = \frac{37}{6}$$

denominator stays the same



$$0.\overline{42}$$

$$0.\underbrace{42}424242\dots$$

$$\begin{array}{r} 100n = 42.\overline{42} \\ - 1n = -0.\overline{42} \\ \hline 99n = 42.0 \end{array}$$
$$n = \frac{42}{99} = \frac{14}{33}$$

5A.) 0  
whole  
integers  
rational

5B.)  $1\frac{4}{5} = \frac{9}{5}$   
rational

5C.) 1.414213562...  
Irrational

