

9-16-14

# Convert #s to rational form

fraction

$14 = \frac{14}{1}$

$2,371 = \frac{2,371}{1}$

$\sqrt{16} = 4 = \frac{4}{1}$

$\sqrt{144} = 12 = \frac{12}{1}$

~~$\sqrt{3} = 1.732...$~~

~~$\sqrt{10} = 3.162...$~~

ones . tenths  
 #  
 10

hundredths thousandths ten-thousandths  
 # # # #  
 100 1000 10,000

$$0.8 = \frac{8}{10} = \left(\frac{4}{5}\right)$$

$$0.89 = \frac{89}{100}$$

$$0.893 = \frac{893}{1000}$$

$$0.\overline{8} = \frac{8}{9}$$

Repeating Decimal

$$0.\overline{89} = \frac{89}{99}$$

$\cdot \frac{9}{9} \quad \frac{99}{99} \quad \frac{999}{999} \quad \frac{9999}{9999}$

$$0.\overline{893} = \frac{893}{999}$$

$$x = .4444\dots$$

1.) multiply by 10

$$\begin{array}{r} 10x = 4.4444 \\ - 1x = .4444 \\ \hline \end{array}$$

$$\begin{array}{r} 9x = 4 \\ \hline 9 \quad 9 \end{array}$$

$$x = \frac{4}{9}$$