

## Dividing Decimals

Recalling parts of a division problem:

divisor →  $6\sqrt{18}$  ← dividend  
quotient

\*\*ALWAYS PLACE THE DECIMAL POINT IN THE QUOTIENT DIRECTLY ABOVE WHERE IT IS IN THE DIVIDEND\*\*

Ex:  $40.95 \div 3$

$$\begin{array}{r}
 13.65 \\
 3 \overline{)40.95} \\
 -3 \quad \swarrow \\
 \hline
 10 \quad \rightarrow \\
 -9 \quad \swarrow \\
 \hline
 15 \quad \rightarrow \\
 -15 \quad \swarrow \\
 \hline
 0
 \end{array}$$

13.65

When dividing by a decimal, rewrite the problem so that the divisor is a whole.

Ex:  $25.75 \div 2.5$

$$\begin{array}{r}
 10.3 \\
 25 \overline{)25.75} \\
 -25 \quad \swarrow \\
 \hline
 75 \quad \rightarrow \\
 -75 \quad \swarrow \\
 \hline
 0
 \end{array}$$

When you divide by a decimal, sometime you need to use extra zeros in the dividend, the quotient or both!

Ex. Find  $0.14 \div 0.04$ .

$$\begin{array}{r}
 0.04 \overline{)0.14} \\
 \underline{-12} \quad \swarrow \\
 \hline
 20 \\
 \underline{-20} \quad \swarrow \\
 \hline
 0
 \end{array}$$

3.5

Find  $17.6 \div 3.2$

$$\begin{array}{r}
 5.5 \\
 32 \overline{)17.6} \\
 -160 \quad \swarrow \\
 \hline
 160 \\
 -160 \quad \swarrow \\
 \hline
 0
 \end{array}$$

Guess & Check

$$\begin{array}{r}
 32 \quad 32 \quad 32 \\
 \times 4 \quad \times 6 \quad \times 5 \\
 \hline
 128 \quad 192 \quad 160
 \end{array}$$

32
64
96
128
160
192

Round to hundredth?

Ex:  $4.26\overline{)7\dots}$

21.123  
 tens      ↑      tenths      ↑      thousandths  
 ones      ↑      hundreds