

Lesson 1-3 Continued

Dividing Decimals

DECIMAL by WHOLE NUMBER

Example 1) $1.8 \div 6$

$$\begin{array}{r} 0.3 \\ 6 \overline{) 1.8} \\ \underline{- 18} \\ 0 \end{array}$$

Ex 3) $14.49 \div 7$

$$\begin{array}{r} 2.07 \\ 7 \overline{) 14.49} \\ \underline{- 14} \downarrow \\ 04 \\ \underline{- 0} \downarrow \\ 49 \\ \underline{- 49} \\ 0 \end{array}$$

Example 2) $22.2 \div 3$

$$\begin{array}{r} 7.4 \\ 3 \overline{) 22.2} \\ \underline{- 21} \\ 12 \end{array}$$

DECIMAL by DECIMAL

Example 1) $11.05 \div 8.5$

$$\begin{array}{r}
 8.5 \overline{) 11.05} \\
 \underline{85} \\
 255 \\
 \underline{255} \\
 0
 \end{array}$$

$$\begin{array}{r}
 1 \\
 \times 85 \\
 \hline
 3 \\
 255 \\
 \hline

 \end{array}$$

STEP 1: Move the decimal in the DIVISOR to the right so that the DIVISOR is a whole number.

Move the decimal in the DIVDEND the same number of spaces to the right.

STEP 2: Add in zeroes, if needed.

STEP 3: Bring the decimal up on the line for the QUOTIENT.

STEP 4: Solve the problem as if the decimal was not there!

Example 2) $25.48 \div 2.6$

$$\begin{array}{r}
 2.6 \overline{) 25.48} \\
 \underline{234} \\
 208 \\
 \underline{208} \\
 0
 \end{array}$$

$$\begin{array}{r}
 5 \\
 \times 26 \\
 \hline
 234
 \end{array}$$

$$\begin{array}{r}
 4 \\
 \times 26 \\
 \hline
 182 \\
 + 260 \\
 \hline
 208
 \end{array}$$

$$\begin{array}{r}
 4 \\
 \times 26 \\
 \hline
 208
 \end{array}$$

Ex 3) $10.8 \div 2.7$

$$\begin{array}{r}
 2.7 \overline{) 10.8} \\
 \underline{108} \\
 0
 \end{array}$$

$$\begin{array}{r}
 2 \\
 \times 27 \\
 \hline
 108
 \end{array}$$

REMEMBER...THERE ARE NO REMAINDERS WHEN DIVIDING DECIMALS!

Example 3) $0.88 \div 0.5$

$$\begin{array}{r} 0.5 \overline{) 0.88} \\ \underline{1.76} \\ 05 \overline{) 08.80} \\ \underline{-5} \downarrow \\ 38 \\ \underline{-35} \downarrow \\ 30 \\ \underline{-30} \\ 0 \end{array}$$

Example 4) $24.7 \div 0.2$

$$\begin{array}{r} 0.2 \overline{) 24.7} \\ \underline{123.5} \\ 2 \overline{) 247.0} \\ \underline{-2} \downarrow \\ 04 \\ \underline{-4} \downarrow \\ 07 \\ \underline{-6} \downarrow \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

You Try!

1) $4.5 \div 2 =$

$$\begin{array}{r} 2.25 \\ 2 \overline{) 4.50} \\ \underline{-4} \\ 05 \\ \underline{-4} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

2) $9.75 \div 0.75 =$

$$0.75 \overline{) 9.75}$$

$$\begin{array}{r} 13 \\ 75 \overline{) 975} \\ \underline{-75} \\ 225 \\ \underline{-225} \\ 0 \end{array}$$

$$\begin{array}{r} 75 \\ \times 3 \\ \hline 225 \end{array}$$

3) $18.36 \div 25.5 =$

$$25.5 \overline{) 18.36}$$

$$255 \overline{) 1836}$$

$$\begin{array}{r} 22 \\ 255 \\ \times 4 \\ \hline 1020 \end{array}$$

$$\begin{array}{r} 424 \\ 255 \\ \times 8 \\ \hline 2040 \end{array}$$