Name _____ Date _____

1. Estimate, then divide. An example has been done for you.

$78.4 \div 0.7 \approx 770 \div 7 = 110$

$= \frac{78.4}{0.7}$

$= \frac{78.4 \times 10}{0.7 \times 10}$

$= \frac{784}{7}$

$= 112$

$$\begin{array}{r} 1\,1\,2 \\ 7\overline{)\,7\,8\,4} \\ -7 \\ \hline 8 \\ -7 \\ \hline 1\,4 \\ -1\,4 \\ \hline 0 \end{array}$$

a. $61.6 \div 0.8 = \frac{61.6}{0.8} \approx \frac{640}{8} = 80$

$= \frac{61.6}{0.8} \times \frac{10}{10}$

$= \frac{616}{8}$

$= 77$

$$\begin{array}{r} 77 \\ 8\overline{)616} \\ -56 \\ \hline 56 \\ -56 \\ \hline 0 \end{array}$$

b. $5.74 \div 0.7 = \frac{5.74}{0.7} \approx \frac{56}{7} = 8$

$= \frac{5.74}{0.7} \times \frac{10}{10}$

$= \frac{57.4}{7}$

$= 8.2$

$$\begin{array}{r} 8.2 \\ 7\overline{)57.4} \\ -56 \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

2. Estimate, then divide. An example has been done for you.

$7.32 \div 0.06 = \frac{7.32}{0.06} \approx 720 \div 6 = 120$

$= \frac{7.32 \times 100}{0.06 \times 100}$

$= \frac{732}{6}$

$= 122$

$$\begin{array}{r} 1\,2\,2 \\ 6\overline{)\,7\,3\,2} \\ -6 \\ \hline 1\,3 \\ -1\,2 \\ \hline 1\,2 \\ -1\,2 \\ \hline 0 \end{array}$$

a. $4.74 \div 0.06 = \frac{4.74}{0.06} \approx \frac{480}{6} = 80$

$= \frac{4.74}{0.06} \times \frac{100}{100}$

$= \frac{474}{6}$

$= 79$

$$\begin{array}{r} 79 \\ 6\overline{)474} \\ -42 \\ \hline 54 \\ -54 \\ \hline 0 \end{array}$$

b. $19.44 \div 0.54 = \frac{19.44}{0.54} \approx \frac{200}{5} = 40$

$= \frac{19.44}{0.54} \times \frac{100}{100}$

$= \frac{1944}{54}$

$= 36$

$$\begin{array}{r} 36 \\ 54\overline{)1944} \\ -162 \\ \hline 324 \\ -324 \\ \hline 0 \end{array}$$

3. Solve using the standard algorithm. Use the thought bubble to show your thinking as you rename the divisor as a whole number.

a. 38.4 ÷ 0.6 = 64

$= \frac{38.4}{0.6}$ → $\frac{384}{6}$

$$\begin{array}{r} 64 \\ 6\overline{)384} \\ -36 \\ \hline 24 \end{array}$$

b. 7.52 ÷ 0.08 = 94

$\frac{7.52}{0.08} = \frac{752}{8}$

$$\begin{array}{r} 94 \\ 8\overline{)752} \\ -72 \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$$

c. 12.45 ÷ 0.5 = 24.9

$\frac{12.45}{0.5} = \frac{124.5}{5}$

$$\begin{array}{r} 24.9 \\ 5\overline{)124.5} \\ -10 \\ \hline 24 \\ -20 \\ \hline 45 \\ -45 \\ \hline 0 \end{array}$$

d. 5.6 ÷ 0.16 = 35

$\frac{5.6}{0.16} = \frac{560}{16}$

$$\begin{array}{r} 35 \\ 16\overline{)560} \\ -48 \\ \hline 80 \\ -80 \\ \hline 0 \end{array}$$

4. Lucia is making a 21.6 centimeter beaded string to hang in the window. She decides to put a green bead every 0.4 centimeters and a purple bead every 0.6 centimeters. How many green beads and how many purple beads will she need?

$21.6 \div 0.4$

$= \frac{21.6}{0.4} \times \frac{10}{10}$

$= \frac{216}{4} = 54$ green beads

$21.6 \div 0.6$

$= \frac{21.6}{0.6} \times \frac{10}{10}$

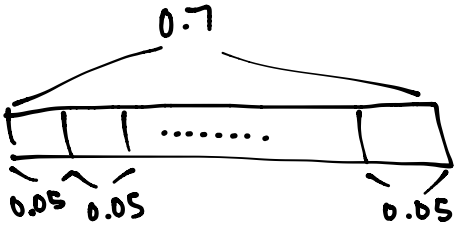
$= \frac{216}{6}$

= 36 purple beads

She will need 54 green beads + 36 purple beads.

NOTE: While this is the "correct" answer, it doesn't make sense because at 1.2 cm, 2.4 cm, etc. both beads would be at the same location.

5. A group of 14 friends collects 0.7 pound of blueberries and decides to make blueberry muffins. They put 0.05 pound of berries in each muffin. How many muffins can they make if they use all the blueberries they collected?



$0.7 \div 0.05$

$= \frac{0.7}{0.05}$

$= \frac{0.7}{0.05} \times \frac{100}{100}$

$= \frac{70}{5} = 14$

They will be able to make 14 muffins.