

# Dividing Decimals

When you divide by a decimal, you need to rewrite the dividend and the divisor so that you are dividing by a whole number.

Find  $2.48 \div 0.8$ .

$$240 \div 80 = 3$$

**Step 1:** Estimate. Use compatible numbers.

**Step 2:** Make the divisor a whole number. Multiply the divisor AND the dividend by the same power of 10.

Place the decimal in the quotient.

**Step 3:** Divide as you would with whole numbers. Remember that sometimes you may need to annex zeros to complete your division.

**Step 4:** Compare the quotient with your estimate.

$$\begin{array}{r} 0.8 \overline{)2.48} \\ \downarrow \end{array}$$

$$\begin{array}{l} 0.8 \times 10 = 8 \\ 2.48 \times 10 = 24.8 \end{array}$$

$$\begin{array}{r} 8 \overline{)24.8} \longrightarrow 8 \overline{)24.8} \\ \underline{24} \phantom{0} \\ 8 \phantom{0} \\ \underline{8} \\ 0 \end{array}$$

Since 3.1 is close to 3, the answer checks.

Find each quotient.

1.  $0.2 \overline{)1.5}$

Estimate: \_\_\_\_\_

Multiply dividend and divisor by what power of 10? \_\_\_\_\_

Place the decimal point in the quotient.

Divide. How many zeros do you need to annex? \_\_\_\_\_

Compare the quotient to your estimate.

Is the answer reasonable? \_\_\_\_\_

2.  $0.6 \overline{)0.36}$

3.  $0.4 \overline{)9.6}$

4.  $0.75 \overline{)0.3}$

5. **Draw a Picture** Fernando used tenths grids to draw this picture showing  $1.6 \div 0.4 = 4$ . Draw a picture to show  $1.8 \div 0.6$ . Write the quotient.

