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Multiplying by Multiples of 10

1 Complete the following multiplication problems.

$$\begin{array}{r} 10 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 1,000 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 200 \\ \times 10 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \times 20 \\ \hline \end{array}$$

2 Use each number below just one time to complete the multiplication problems.

3	6	30	60
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$$\begin{array}{r} 80 \\ \times \boxed{} \\ \hline 2400 \end{array}$$

$$\begin{array}{r} 70 \\ \times \boxed{} \\ \hline 420 \end{array}$$

$$\begin{array}{r} 40 \\ \times \boxed{} \\ \hline 2400 \end{array}$$

$$\begin{array}{r} 60 \\ \times \boxed{} \\ \hline 180 \end{array}$$

3 Complete each basic fact and the related multiplication problem. Then write and solve another multiplication problem you could solve with that basic fact. You can use numbers that are as big as you want them to be.

Basic Facts	Related Problem	Your Own Problem and Solution
ex $4 \times 5 = \underline{20}$	$40 \times 5 = \underline{200}$	$40 \times 500 = 20,000$
a $6 \times 4 = \underline{\hspace{2cm}}$	$60 \times 40 = \underline{\hspace{2cm}}$	
b $8 \times 7 = \underline{\hspace{2cm}}$	$80 \times 7 = \underline{\hspace{2cm}}$	
c $3 \times 9 = \underline{\hspace{2cm}}$	$30 \times 9 = \underline{\hspace{2cm}}$	
d $9 \times 6 = \underline{\hspace{2cm}}$	$90 \times 60 = \underline{\hspace{2cm}}$	
e $9 \times 4 = \underline{\hspace{2cm}}$	$90 \times 4 = \underline{\hspace{2cm}}$	

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Metric Conversions

Knowing how to multiply and divide by 10, 100, and 1,000 can help you make conversions between units in the metric system.

1 Metric Units of Length/Distance

<p>a Complete the following sentences.</p> <p>There are <u>1,000</u> millimeters in 1 meter.</p> <p>There are _____ centimeters in 1 meter.</p> <p>There are _____ meters in 1 kilometer.</p>	<p>b Use the information in part <i>a</i> to complete the equivalencies below.</p> <p><u>10</u> millimeters = 1 centimeter</p> <p>_____ centimeters = 1 kilometer</p> <p>_____ millimeters = 1 kilometer</p>
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2 Metric Units of Volume/Capacity

<p>a Complete the following sentences.</p> <p>There are <u>1,000</u> milliliters in 1 liter.</p> <p>There are _____ centiliters in 1 liter.</p> <p>There are _____ liters in 1 kiloliter.</p>	<p>b Use the information in part <i>a</i> to complete the equivalencies below.</p> <p><u>3,000</u> milliliters = 3 liters</p> <p>_____ centiliters = 4 liters</p> <p>_____ liters = 7 kiloliters</p>
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3 Metric Units of Mass

<p>a Complete the following sentences.</p> <p>There are <u>1,000</u> milligrams in 1 gram.</p> <p>There are _____ centigrams in 1 gram.</p> <p>There are _____ grams in 1 kilogram.</p>	<p>b Use the information in part <i>a</i> to complete the equivalencies below.</p> <p><u>2,500</u> milligrams = 2.5 grams</p> <p>_____ centigrams = 4.5 grams</p> <p>_____ grams = 3.5 kilograms</p>
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CHALLENGE

4 Complete the following conversions.

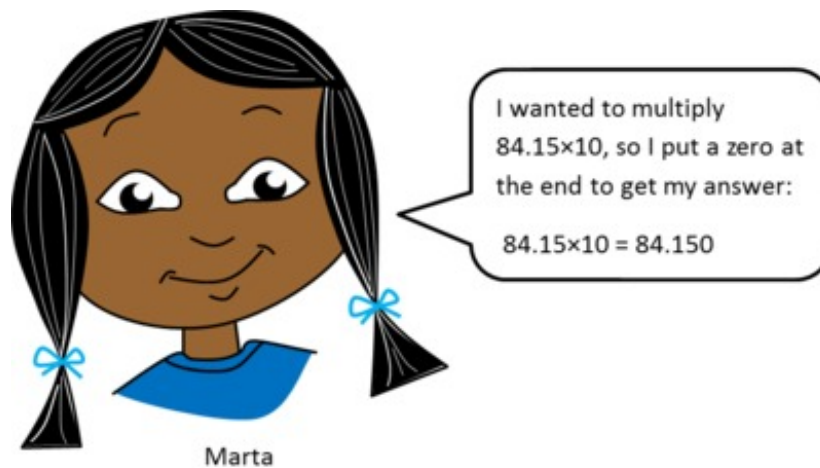
a _____ millimeters = 1 kilometer

b _____ millimeters = 4.5 kilometers

Marta's Multiplication Error

Task

Marta made an error while finding the product 84.15×10



In your own words, explain Marta's misunderstanding. Please explain what she should do to get the correct answer and include the correct answer in your response.

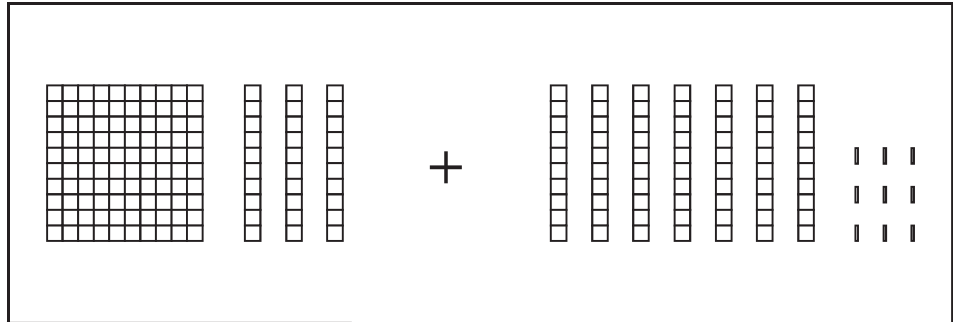
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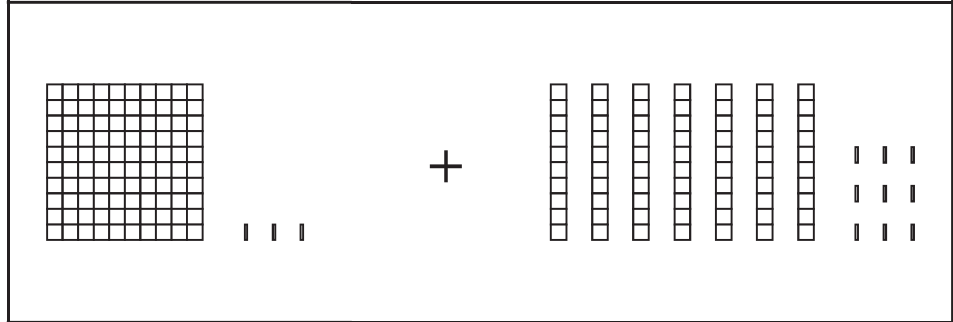
Modeling, Adding & Subtracting Decimals

1 Draw a line to match each expression to the place value model that represents it.

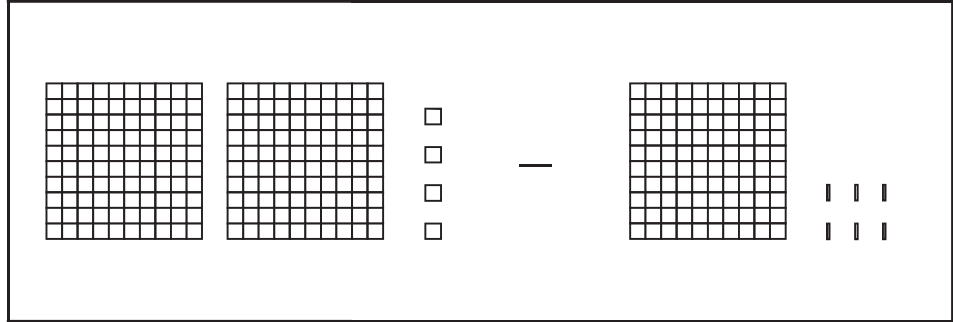
a $1.3 + 0.709$



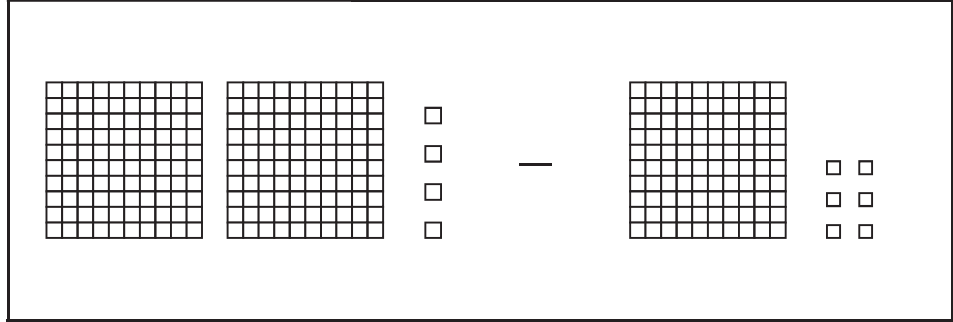
b $2.04 - 1.06$



c $1.003 + 0.709$



d $2.04 - 1.006$



2 Use a $<$ or $>$ sign to complete the number sentence. Use the models above to help you.

a $1.3 + 0.709$ 2

b $2.04 - 1.06$ 1

c $1.003 + 0.709$ 2

d $2.04 - 1.006$ 1

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Adding & Subtracting Decimals

1 Complete the following addition problems.

$$\begin{array}{r} 3.034 \\ + 1.886 \\ \hline 4.920 \end{array}$$

$$\begin{array}{r} 4.067 \\ + 3.290 \\ \hline \end{array}$$

$$\begin{array}{r} 1.437 \\ + 1.042 \\ \hline \end{array}$$

$$\begin{array}{r} 7.63 \\ + 4.592 \\ \hline \end{array}$$

$$\begin{array}{r} 4.803 \\ + 1.420 \\ \hline \end{array}$$

$2.45 + 1.469 = \underline{\hspace{2cm}}$

$3.043 + 1.588 = \underline{\hspace{2cm}}$

2 Complete the following subtraction problems.

$$\begin{array}{r} 3.046 \\ - 1.273 \\ \hline 1.773 \end{array}$$

$$\begin{array}{r} 2.405 \\ - 0.512 \\ \hline \end{array}$$

$$\begin{array}{r} 3.437 \\ - 2.106 \\ \hline \end{array}$$

$$\begin{array}{r} 5.26 \\ - 3.40 \\ \hline \end{array}$$

$$\begin{array}{r} 4.513 \\ - 1.382 \\ \hline \end{array}$$

$5.604 - 3.025 = \underline{\hspace{2cm}}$

$6.045 - 2.039 = \underline{\hspace{2cm}}$

3 Circle the pairs of numbers whose sums are greater than 2.

$1.26 + 0.773$

$1.255 + 0.094$

$1.53 + 0.458$

$1.502 + 0.6$

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Decimal Story Problems

1a In the 2008 Beijing Summer Olympics, Jamaican runner Usain Bolt ran the 200 meter dash in 19.30 seconds, coming in first place and breaking the world record for that race. The runner who came in second, Churandy Martina, finished the race in 19.82 seconds. By how much did Bolt win the race? Show all your work.

b Did Bolt run the race more or less than a half-second faster than the second place finisher? Explain how you can tell.

2a In the 2008 Beijing Summer Olympics, Usain Bolt ran the 100-meter dash in 9.69 seconds. Is that less than half, exactly half, or more than half as long as it took him to run the 200-meter dash? Show all your work.

b Does your answer to part 2a make sense to you? Explain why or why not.