



Lesson 1.1

**Lesson 1-1: Fluently Add, Subtract, and Multiply Decimals**

**I can...** add, subtract and multiply decimals.



**Solve & Discuss It!**

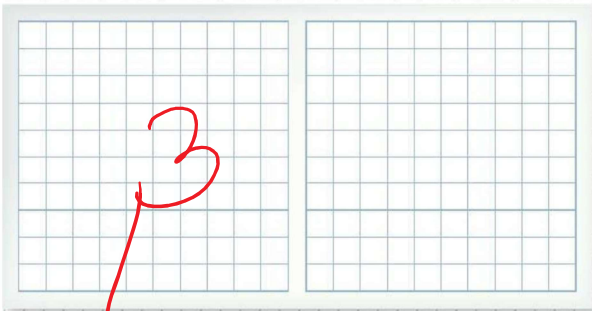
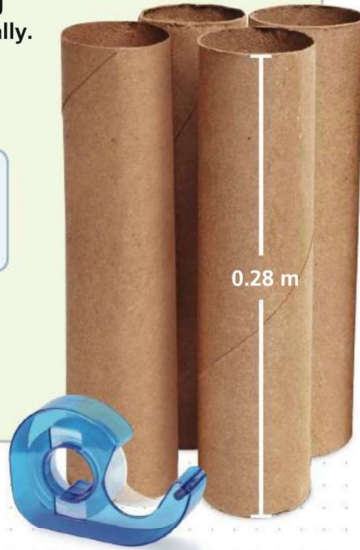


ACTIVITY

Maxine is making a model windmill for a science fair. She is connecting 4 cardboard tubes together vertically. Each tube is 0.28 meter in length. What is the combined measure of the connected tubes?

**Use Appropriate Tools**

You can use decimal grids to calculate with decimals.



1.12 m

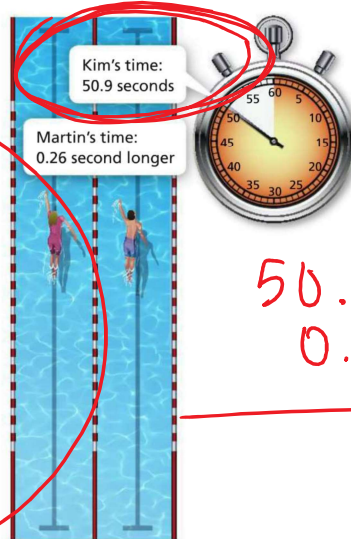
x 10

11.2 m

Suppose that Maxine made another windmill model by connecting 4 cardboard tubes that are each 2.8 meters long. What is the combine measure of the model? What relationships do you see in the factors you used here and above? Explain how this helps you solve the problem.

### Example 1: Add Decimals

Kim and Martin swam 50 meters. Martin took 0.26 seconds longer than Kim. What is Martin's time in the race?



$$\begin{array}{r} 1 \\ 50.90 \\ + 00.26 \\ \hline 51.16 \text{ sec} \end{array}$$

$$\begin{array}{r} 50.900 \\ + 0.267 \\ \hline \end{array}$$

### Try it!

Suppose that Martin finished the race 0.47 second after Kim. What was Martin's time in the race? Use an estimated check to see if your answer is reasonable.

$$\begin{array}{r} 50.9 \\ + 0.47 \\ \hline 51.37 \end{array} \quad \begin{array}{r} 60 \\ + 0.5 \\ \hline 60.5 \end{array}$$

### Convince Me!

If Martin finished the race 0.267 second after Kim, you would need to add 0.267 to 50.9 to solve the problem. How is adding 0.267 to 50.9 different from adding 0.26 to 50.9?

### Example 2: Subtracting Decimals

Amy ran a race in 20.7 seconds. Katie finished the race 0.258 seconds before Amy.  
How long did it take Katie to run the race?

$$\begin{array}{r}
 \text{Amy } 20.\overset{6}{7}\overset{9}{10} \\
 - 0.258 \\
 \hline
 20.442 \text{ sec}
 \end{array}$$

*Katie is faster*

Try it!

Suppose Katie finished the race 0.13 second before Amy. What was Katie's time in the race? Use an estimation to check that your answer is reasonable.

$$\begin{array}{r}
 20.57 \\
 \hline
 20.7 \\
 - 0.13 \\
 \hline
 \hline
 \end{array}$$

*\* line decimals*

### Example 3: Multiply Decimals

What is the area of this antique map? Use the formula  $A = lw$

$$\begin{array}{r}
 3.25 \\
 \times 2.5 \\
 \hline
 1625 \\
 + 6500 \\
 \hline
 8125
 \end{array}$$

2.5 ft



3.25 ft

$$8.125 \text{ ft}^2$$

Try it!

How do you determine where to place the decimal point in the product?

$$0.43 \times 0.2$$

To add decimals, line up place values and add. Regroup as needed.

$$\begin{array}{r} 50.90 \\ + 0.26 \\ \hline 51.16 \end{array}$$

To subtract decimals, line up place values and subtract. Regroup as needed.

$$\begin{array}{r} 20.\overset{6}{\cancel{7}}\overset{10}{00} \\ - 0.258 \\ \hline 20.442 \end{array}$$

To multiply decimals, multiply as you would with whole numbers. Then use the number of decimal places in the factors to place the decimal point in the product.

$$\begin{array}{r} 1.35 \\ \times 4.6 \\ \hline 810 \\ + 5400 \\ \hline 6.210 \end{array}$$

### Do you understand?

1.) How can you add, subtract, and multiply with decimals?

2.) How is adding and subtracting decimals similar to and different from adding and subtracting whole numbers?

3.) What can you do if a decimal product has final zeros to the right of the decimal point?

Rate your understanding. 1-Do not understand....4-can teach someone else

Learning Target: add, subtract and multiply decimals.				
I can add decimals.	1	2	3	4
I can subtract decimals.	1	2	3	4
I can multiply decimals.	1	2	3	4