

A Story of Units

**Pleasanton**  
UNIFIED SCHOOL DISTRICT

**Mathematics Curriculum**



## **Grade 4 • MODULE 2**

Unit Conversions and Problem Solving with Metric  
Measurement

# **Homework**

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Video tutorials: <http://embarc.online>  
Info for parents: <http://bit.ly/pusdmath>

Version 3



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**GRADE 4 • MODULE 2**

## Unit Conversions and Problem Solving with Metric Measurement

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Name \_\_\_\_\_

Date \_\_\_\_\_

1. Find the equivalent measures.

a.  $5 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

b.  $13 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

c.  $\underline{\hspace{2cm}} \text{ km} = 17,000 \text{ m}$

d.  $60 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

e.  $7 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

f.  $19 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

g.  $\underline{\hspace{2cm}} \text{ m} = 2,400 \text{ cm}$

h.  $90 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

2. Find the equivalent measures.

a.  $7 \text{ km } 123 \text{ m} = \underline{\hspace{2cm}} \text{ m}$

b.  $22 \text{ km } 22 \text{ m} = \underline{\hspace{2cm}} \text{ m}$

c.  $875 \text{ km } 4 \text{ m} = \underline{\hspace{2cm}} \text{ m}$

d.  $7 \text{ m } 45 \text{ cm} = \underline{\hspace{2cm}} \text{ cm}$

e.  $67 \text{ m } 7 \text{ cm} = \underline{\hspace{2cm}} \text{ cm}$

f.  $204 \text{ m } 89 \text{ cm} = \underline{\hspace{2cm}} \text{ cm}$

3. Solve.

a.  $2 \text{ km } 303 \text{ m} - 556 \text{ m}$

b.  $2 \text{ m} - 54 \text{ cm}$

c. Express your answer in the smaller unit:  
 $338 \text{ km } 853 \text{ m} + 62 \text{ km } 71 \text{ m}$

d. Express your answer in the smaller unit:  
 $800 \text{ m } 35 \text{ cm} - 154 \text{ m } 49 \text{ cm}$

e.  $701 \text{ km} - 523 \text{ km } 445 \text{ m}$

f.  $231 \text{ km } 811 \text{ m} + 485 \text{ km } 829 \text{ m}$

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Complete the conversion table.

Mass	
kg	g
1	1,000
6	
	8,000
15	
	24,000
550	

2. Convert the measurements.

a.  $2 \text{ kg } 700 \text{ g} = \underline{\hspace{2cm}} \text{ g}$

b.  $5 \text{ kg } 945 \text{ g} = \underline{\hspace{2cm}} \text{ g}$

c.  $29 \text{ kg } 58 \text{ g} = \underline{\hspace{2cm}} \text{ g}$

d.  $31 \text{ kg } 3 \text{ g} = \underline{\hspace{2cm}} \text{ g}$

e.  $66,597 \text{ g} = \underline{\hspace{1cm}} \text{ kg } \underline{\hspace{1cm}} \text{ g}$

f.  $270 \text{ kg } 41 \text{ g} = \underline{\hspace{2cm}} \text{ g}$

3. Solve.

a.  $370 \text{ g} + 80 \text{ g}$

b.  $5 \text{ kg} - 730 \text{ g}$

c. Express the answer in the smaller unit:  
 $27 \text{ kg } 547 \text{ g} + 694 \text{ g}$

d. Express the answer in the smaller unit:  
 $16 \text{ kg} + 2,800 \text{ g}$

e. Express the answer in mixed units:  
 $4 \text{ kg } 229 \text{ g} - 355 \text{ g}$

f. Express the answer in mixed units:  
 $70 \text{ kg } 101 \text{ g} - 17 \text{ kg } 862 \text{ g}$

Use a tape diagram to model each problem. Solve using a simplifying strategy or an algorithm, and write your answer as a statement.

4. One suitcase weighs 23 kilograms 696 grams. Another suitcase weighs 25 kilograms 528 grams. What is the total weight of the two suitcases?

5. A bag of potatoes and a bag of onions combined weigh 11 kilograms 15 grams. If the bag of potatoes weighs 7 kilograms 300 grams, how much does the bag of onions weigh?

6. The table to the right shows the weight of three dogs. What is the difference in weight between the heaviest and lightest dog?

Dog	Weight
Lassie	21 kg 249 g
Riley	23 kg 128 g
Fido	21,268 g

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Complete the conversion table.

Liquid Capacity	
L	mL
1	1,000
8	
27	
	39,000
68	
	102,000

2. Convert the measurements.

a.  $5 \text{ L } 850 \text{ mL} = \underline{\hspace{2cm}} \text{ mL}$

b.  $29 \text{ L } 303 \text{ mL} = \underline{\hspace{2cm}} \text{ mL}$

c.  $37 \text{ L } 37 \text{ mL} = \underline{\hspace{2cm}} \text{ mL}$

d.  $17 \text{ L } 2 \text{ mL} = \underline{\hspace{2cm}} \text{ mL}$

e.  $13,674 \text{ mL} = \underline{\hspace{1cm}} \text{ L } \underline{\hspace{1cm}} \text{ mL}$

f.  $275,005 \text{ mL} = \underline{\hspace{1cm}} \text{ L } \underline{\hspace{1cm}} \text{ mL}$

3. Solve.

a.  $545 \text{ mL} + 48 \text{ mL}$

b.  $8 \text{ L} - 5,740 \text{ mL}$

c. Express the answer in the smaller unit:  
 $27 \text{ L } 576 \text{ mL} + 784 \text{ mL}$

d. Express the answer in the smaller unit:  
 $27 \text{ L} + 3,100 \text{ mL}$

e. Express the answer in mixed units:  
 $9 \text{ L } 213 \text{ mL} - 638 \text{ mL}$

f. Express the answer in mixed units:  
 $41 \text{ L } 724 \text{ mL} - 28 \text{ L } 945 \text{ mL}$



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Complete the table.

Smaller Unit	Larger Unit	How Many Times as Large as?
centimeter	meter	100
	hundred	100
meter	kilometer	
gram		1,000
one		1,000
milliliter		1,000
one	hundred thousand	

2. Fill in the unknown unit in word form.

a. 135 is 1 \_\_\_\_\_ 35 ones.

b. 135 cm is 1 \_\_\_\_\_ 35 cm.

c. 1,215 is 1 \_\_\_\_\_ 215 ones.

d. 1,215 m is 1 \_\_\_\_\_ 215 m.

e. 12,350 is 12 \_\_\_\_\_ 350 ones.

f. 12,350 g is 12 kg 350 \_\_\_\_\_.

3. Write the unknown number.

a. \_\_\_\_\_ is 125 thousands 312 ones.

b. \_\_\_\_\_ mL is 125 L 312 mL.



4. Fill in each with  $>$ ,  $<$ , or  $=$ .

a. 890,353 mL  89 L 353 mL

b. 2 km 13 m  2,103 m

5. Brandon's backpack weighs 3,140 grams. Brandon weighs 22 kilograms 610 grams more than his backpack. If Brandon stands on a scale wearing his backpack, what will the weight read?

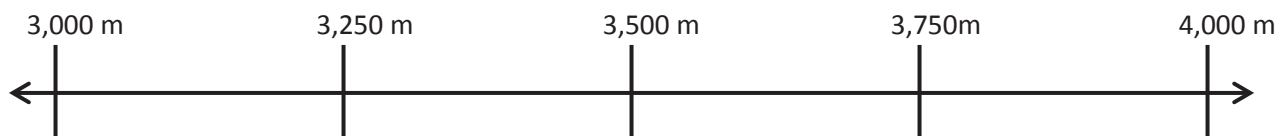
6. Place the following measurements on the number line:

3 km 275 m

3,500 m

3 km 5 m

394,000 cm



7. Place the following measurements on the number line:

1 kg 379 g

3,079 g

2 kg 79 g

3,579 g

579 g





4. A Springer Spaniel weighs 20 kilograms 490 grams. A Cocker Spaniel weighs 7,590 grams less than a Springer Spaniel. A Newfoundland weighs 52 kilograms 656 grams more than a Cocker Spaniel. What is the difference, in grams, between the weights of the Newfoundland and the Springer Spaniel?
5. Marsha has three rugs. The first rug is 2 meters 87 centimeters long. The second rug has a length 98 centimeters less than the first. The third rug is 111 centimeters longer than the second rug. What is the difference in centimeters between the length of the first rug and the third rug?
6. One barrel held 60 liters 868 milliliters of sap. A second barrel held 20,089 milliliters more sap than the first. A third barrel held 40 liters 82 milliliters less sap than the second. If the sap from the three barrels was poured into a larger container, how much sap would there be in all?











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