

Key

NAME

DATE

PERIOD

# Unit 3, Lesson 4: Converting Units

1. Priya's family exchanged 250 dollars for 4,250 pesos. Priya bought a sweater for 510 pesos. How many dollars did the sweater cost?

Show work!

pesos	dollars
4,250	250
425	25
17	1
51	3
510	30

Handwritten annotations:  $\div 10$  (between 4,250 and 425),  $\div 25$  (between 425 and 17),  $\times 3$  (between 17 and 51),  $\times 10$  (between 51 and 510) on the left.  $\div 10$  (between 250 and 25),  $\div 25$  (between 25 and 1),  $\times 3$  (between 1 and 3),  $\times 10$  (between 3 and 30) on the right.

4

2. There are 3,785 milliliters in 1 gallon, and there are 4 quarts in 1 gallon. For each question, explain or show your reasoning.

a. How many milliliters are in 3 gallons?

11,355 mL

ML	Gallon	Q	Gallon
3,785	1	4	1
11,355	3		

Handwritten annotations:  $\times 3$  (between 3,785 and 11,355),  $\times 3$  (between 1 and 3).

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b. How many milliliters are in 1 quart?

$3785 \frac{\text{mL}}{\text{gallon}} \div 4 = 946.25 \text{ mL}$

3. Lin knows that there are 4 quarts in a gallon. She wants to convert 6 quarts to gallons, but cannot decide if she should multiply 6 by 4 or divide 6 by 4 to find her answer. What should she do? Explain or show your reasoning. If you get stuck, consider drawing a double number line or using a table.

6 quarts is MORE than 1 gallon so  $6 \div 4 = 1\frac{3}{4}$  or  $1\frac{1}{2}$  gallons

4. Tyler has a baseball bat that weighs 28 ounces. Find this weight in kilograms and in grams. (Note: 1 kilogram  $\approx$  35 ounces)

Challenge

Kg	ounce
1	35
0.2	7
0.8	28

Handwritten annotations:  $\times \frac{1}{5}$  or  $\div 5$  (between 1 and 0.2),  $\times 4$  (between 0.2 and 0.8),  $\times \frac{1}{5}$  or  $\div 5$  (between 35 and 7),  $\times 4$  (between 7 and 28).

$0.8 \text{ kg} \times 1000 \text{ g} = 800 \text{ grams}$

5. Identify whether each unit measures length, volume, or weight (or mass).

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Q	G
4	1
6	1 1/2

Handwritten annotations:  $\times \frac{1}{5}$  (between 4 and 6),  $\times \frac{1}{5}$  (between 1 and 1 1/2).

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- a. Mile *Length*
- b. Cup *Volume*
- c. Pound *Weight*
- d. Centimeter *Length*

- e. Liter *Volume*
- f. Gram *Weight*
- g. Pint *Volume*
- h. Yard *Length*

- i. Kilogram *Weight/Mass*
- j. Teaspoon *Volume*
- k. Milliliter *Volume*

(from Unit 3, Lesson 1)

6. A recipe for trail mix uses 7 ounces of almonds with 5 ounces of raisins. (Almonds and raisins are the only ingredients.) How many ounces of almonds would be in a one-pound bag of this trail mix? Explain or show your reasoning.

$$\frac{7}{1} \cdot \frac{4}{3} = \frac{28}{3} = 9\frac{1}{3}$$

$$\frac{7}{12} \cdot \frac{16}{1} = \frac{112}{12} = 9\frac{4}{12}$$

Fill in more as needed

A	whole	Total
7	5	12
$9\frac{1}{3}$		16oz
$\frac{7}{12}$	$\frac{5}{12}$	1

*part*      *part*

*x 4/3*      *x 4/3*

$$\frac{16}{12} = 1\frac{4}{12}$$

or  $\frac{4}{3}$

(from Unit 2, Lesson 11)

7. An ant can travel at a constant speed of 980 inches every 5 minutes.

a. How far does the ant travel in 1 minute?

*196 inches*

b. At this rate, how far can the ant travel in 7 minutes?

*1,372 inches*

in	min
980	5
196	1
1,372	7

*x 7*

(from Unit 2, Lesson 9)

*20*