Unit 3, Lesson 3: Measuring with Di#erent-Sized Units

1. Decide if each is a measurement of length, area, volume, or weight (or mass).

   a. How many centimeters across a handprint *length*

   b. How many square inches of paper needed to wrap a box *area*

   c. How many gallons of water in a =sh tank *volume*

   d. How many pounds in a bag of potatoes *weight*

   e. How many feet across a swimming pool *length*

   f. How many ounces in a bag of grapes *weight*

   g. How many liters in a punch bowl *volume*

   h. How many square feet of grass in a lawn *area*

   (from Unit 3, Lesson 2)

   /8

2. Clare says, "This classroom is 11 meters long. A meter is longer than a yard, so if I measure the length of this classroom in yards, I will get less than 11 yards." Do you agree with Clare? Explain your reasoning.

   No, need more yards because they are shorter.

   /1

3. Tyler's height is 57 inches. What could be his height in centimeters? Explain your reasoning.

   A. 22.4
   B. 57
   C. 144.8
   D. 3,551

   Going to be more centimeters because they are shorter — a little more than 2 cm in one inch so 144.8 cm is reasonable.

   /1

NAME   DATE   PERIOD

4. A large soup pot holds 20 quarts. What could be its volume in liters?

   A. 7.57

   B. 19

   C. 21

   D. 75.7

Quarts and liters are similar but a quart is slightly larger so 21 liters is a good estimate. /1

5. Clare wants to mail a package that weighs $4\frac{1}{2}$ pounds. What could this weight be in kilograms?

   A. 2.04

   B. 4.5

   C. 9.92

   D. 4,500

A kilogram is about (a little over) 2 pounds so it would take about half as many kilograms. /1

6. Noah bought 15 baseball cards for $9.00. Assuming each baseball card costs the same amount, answer the following questions.

   a. At this rate, how much will 30 baseball cards cost? Explain your reasoning.

     Double 15 $18

   b. At this rate, how much will 12 baseball cards cost? Explain your reasoning.

     12 × .60 for 1 = $7.20   /3

   c. Do you think this information would be better represented using a table or a double number line? Explain your reasoning.

     Table easier to do math, but double # line would work.

(from Unit 2, Lesson 13)

7. Jada traveled 135 miles in 3 hours. Andre traveled 228 miles in 6 hours. Both Jada and Andre traveled at a constant speed.

   ×2

   270 miles 6 hours

   a. How far did Jada travel in 1 hour? *divide* $\dfrac{135\ \text{miles}}{3\ \text{hr}} = \dfrac{45\ \text{miles}}{1\ \text{hour}}$

   b. How far did Andre travel in 1 hour? $\dfrac{228\ \text{miles}}{6\ \text{hr}} = \dfrac{38\ \text{miles}}{1\ \text{hour}}$

   c. Who traveled faster? Explain or show your reasoning. *Jada either compare distance in 6 hours 270 > 228 or compare for one hour. 45 mph > 38 mph*   /3

(from Unit 2, Lesson 9)