Wednesday HW Key

NAME _____ 0 DATE _____ PERIOD _____

(handwritten number line at top: 0, 20, 40, 60, 80, 100 (circled 25), 120, 140, 160, 180, 200; labeled 0% at start, 40 and 25 above)

Unit 3, Lesson 14: Solving Percentage Problems

1. For each problem, explain or show your reasoning.

   a. 160 is what percentage of 40?   **400% because 40 × ⬜4 is 160.**
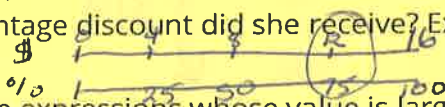
   b. 40 is 160% of what number? **25**

   $40 \div 8 = 5$ count by 5's or think ⬜ × 4 = 100

   (number line: % 0 20 40 60 80 100(circled) 120 140 160 over number 0 5 10 15 20 25(circled) 30 35 40) /3

   c. What number is 40% of 160?

   10% of 160 is 16 so 4 × 16 = **64**

2. A store is having a 20%-off sale on all merchandise. If Mai buys one item and saves $13, what was the original price of her purchase? Explain or show your reasoning.

   $13 saved = 20%, 20% is $\frac{1}{5}$ so × by 5 = $65   /1

3. The original price of a scarf was $16. During a store-closing sale, a shopper saved $12 on the scarf. What percentage discount did she receive? Explain or show your reasoning.

   (number line with $ and % marks)   /1

   x.75 ($ 16 / 12 | % 100 / 75) x.75

4. Select **all** the expressions whose value is larger than 100.

   (A.) 120% of 100   120
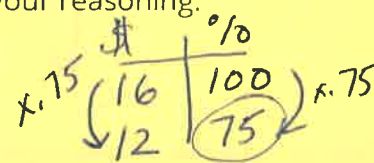
   B. 50% of 150

   C. 150% of 50

   (D.) 20% of 800 $\frac{1}{5}$ of 800 = 160

   E. 200% of 30

   (F.) 500% of 400   Every 100% is 400 so 500% is 400×5 = 2000   /3

   G. 1% of 1,000

5. An ant travels at a constant rate of 30 cm every 2 minutes.

   (table)
dist (cm)	time (min)
30	2

   a. At what pace does the ant travel per centimeter? $\frac{2 \text{ min}}{30 \text{ cm}}$ $\frac{1}{15}$ min per cm .066 min per cm

   b. At what speed does the ant travel per minute? $\frac{30}{2 \text{ min}}$ **15 cm per min** /2

   (from Unit 3, Lesson 8)

NAME   DATE   PERIOD

6. Is $3\frac{1}{2}$ cups more or less than 1 liter? Explain or show your reasoning. (Note: 1 cup ≈ 236.6 milliliters)

$3\frac{1}{2}$ cups × 236.6 mL per cup = 828.1 mL

1 liter has 1000 mL so 1
    liter is more

(from Unit 3, Lesson 4)

7. Name a unit of measurement that is about the same size as each object.

a. The distance of a doorknob from the floor is about 1 ___meter___ or yar

b. The thickness of a fingernail is about 1 ___mm millimeter___

c. The volume of a drop of honey is about 1 ___mL milliliter___

d. The weight or mass of a pineapple is about 1 ___pound___ or kilogram

e. The thickness of a picture book is about 1 ___centimeter or in___

f. The weight or mass of a buffalo is about 1 ___ton___.

g. The volume of a flower vase is about 1 ___cup, quart, liter___

h. The weight or mass of 20 staples is about 1 ___gram___

i. The volume of a melon is about 1 ___gallon or quart or liter___

j. The length of a piece of printer paper is about 1 ___foot___.

(from Unit 3, Lesson 2)