

NAME

DATE

PERIOD

## Unit 5, Lesson 16: Representing Contexts with Equations

1. Match each situation to one of the equations.

- |  |                  |
|--|------------------|
| A. A whale was diving at a rate of 2 meters per second. How long will it take for the whale to get from the surface of the ocean to an elevation of -12 meters at that rate? | 1. $-12 + x = 2$ |
| B. A swimmer dove below the surface of the ocean. After 2 minutes, she was 12 meters below the surface. At what rate was she diving?   | 2. $2 + x = -12$ |
| C. The temperature was -12 degrees Celsius and rose to 2 degrees Celsius. What was the change in temperature?  | 3. $-2x = -12$   |
| D. The temperature was 2 degrees Celsius and fell to -12 degrees Celsius. What was the change in temperature?  | 4. $2x = -12$    |

2. Starting at noon, the temperature dropped steadily at a rate of 0.8 degrees Celsius every hour.

For each of these situations, write and solve an equation and describe what your variable represents.

- How many hours did it take for the temperature to decrease by 4.4 degrees Celsius?
  - If the temperature after the 4.4 degree drop was -2.5 degrees Celsius, what was the temperature at noon?
3. Kiran mixes  $\frac{3}{4}$  cups of raisins, 1 cup peanuts, and  $\frac{1}{2}$  cups of chocolate chips to make trail mix. How much of each ingredient would he need to make 10 cups of trail mix? Explain your reasoning.

(from Unit 4, Lesson 3)

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4. Find the value of each expression.

a.  $12 + (-10)$

b.  $(-5) - 6$

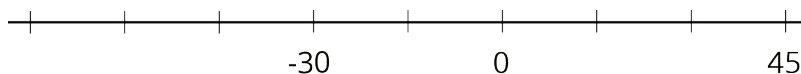
c.  $(-42) + 17$

d.  $35 - (-8)$

e.  $(-4\frac{1}{2}) + 3$

(from Unit 5, Lesson 6)

5. The markings on the number line are evenly spaced. Label the other markings on the number line.



(from Unit 5, Lesson 8)

6. Kiran drinks 6.4 oz of milk each morning. How many days does it take him to finish a 32 oz container of milk?

a. Write and solve an equation for the situation.

b. What does the variable represent?