LESSON 7 Writing Equations

An equation is an open sentence that says two expressions are equal. An equation can describe a situation.

Melina is \( \Delta \) years old. Wade is 3 years younger than Melina. Wade is 7 years old.

If \( \Delta = \) Melina’s age, this situation can be described with the equation \( \Delta - 3 = 7 \).

Read each problem. Circle the letter of the best answer.

1. There were \( \square \) goldfish crackers in a bag. Danny ate 20 of them. There were 60 goldfish crackers left in the bag. Which equation describes this situation?
   - A \( \square + 20 = 60 \)
   - B \( \square - 20 = 60 \)
   - C \( \square \times 20 = 60 \)
   - D \( \square ÷ 20 = 60 \)

   The number of goldfish crackers Danny ate, 20, is subtracted from the total number in the bag, \( \square \), and the number left is 60. So the equation is \( \square - 20 = 60 \). The correct answer is B.

2. When a mystery number, \( \star \), is multiplied by 6, the answer is 18. Which equation shows this?
   - A \( \star + 6 = 18 \)
   - B \( \star \times 6 = 18 \)
   - C \( \star = 6 \times 18 \)
   - D \( \star = 6 ÷ 18 \)

3. Selene had 12 dog stickers on her backpack. Today she put \( \Delta \) more dog stickers on her backpack, and now there are 17 in all. Which equation shows this?
   - A \( 12 + 17 = \Delta \)
   - B \( 12 - 17 = \Delta \)
   - C \( 12 + \Delta = 17 \)
   - D \( 12 \times \Delta = 17 \)

4. A pizza weighed a total of \( \square \) ounces. It was cut into 8 equal pieces. Each piece weighed 4 ounces. Which equation describes this situation?
   - A \( 8 - \square = 4 \)
   - B \( 8 ÷ \square = 4 \)
   - C \( \square \times 8 = 4 \)
   - D \( \square ÷ 8 = 4 \)
Read each problem. Write your answers.

5  Freddie’s family stayed in a motel 300 yards from the beach. They walked $\frac{1}{4}$ yards from the motel and had 120 yards left to the beach.

A  Write an equation to describe this situation.

*Answer:* ________________________________

B  Explain how you found your answer.

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6  Addison’s classroom has 5 shelves of picture books. Each shelf has $\triangle$ books. There are 120 picture books in all.

A  Write an equation to describe this situation.

*Answer:* ________________________________

B  Addison says there are more than 10 picture books on each shelf. Is Addison right?

*Answer:* ________________________________

C  Explain how you decided if there are more than 10 picture books on each shelf.

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