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

Melina is  $\triangle$  years old. Wade is 3 years younger than Melina. Wade is 7 years old.

If  $\triangle =$  Melina's age, this situation can be described with the equation  $\triangle - 3 = 7$ .

The variable in an equation stands for a missing number.

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  $\square \div 20 = 60$

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  $\star = 6 \div 18$

- 3 Selene had 12 dog stickers on her backpack. Today she put  $\triangle$  more dog stickers on her backpack, and now there are 17 in all. Which equation shows this?

- A  $12 + 17 = \triangle$   
 B  $12 - 17 = \triangle$   
 C  $12 + \triangle = 17$   
 D  $12 \times \triangle = 17$

- 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  $8 \div \square = 4$   
 C  $\square \times 8 = 4$   
 D  $\square \div 8 = 4$

**Read each problem. Write your answers.**

**5** Freddie's family stayed in a motel 300 yards from the beach. They walked  $\star$  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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