# Lesson 9 Practice Problems

1. A preschool teacher is rearranging four boxes of playing blocks so that each box contains an equal number of blocks. Currently Box 1 has 32 blocks, Box 2 has 18, Box 3 has 41, and Box 4 has 9.

   Select **all** the ways he could make each box have the same number of blocks.

   A. Remove all the blocks and make four equal piles of 25, then put each pile in one of the boxes.

   B. Remove 7 blocks from Box 1 and place them in Box 2.

   C. Remove 21 blocks from Box 3 and place them in Box 4.

   D. Remove 7 blocks from Box 1 and place them in Box 2, and remove 21 blocks from Box 3 and place them in Box 4.

   E. Remove 7 blocks from Box 1 and place them in Box 2, and remove 16 blocks from Box 3 and place them in Box 4.

2. In a round of mini-golf, Clare records the number of strokes it takes to hit the ball into the hole of each green.

   | 2 | 3 | 1 | 4 | 5 | 2 | 3 | 4 | 3 |
   |---|---|---|---|---|---|---|---|---|

   She said that, if she redistributed the strokes on different greens, she could tell that her average number of strokes per hole is 3. Explain how Clare is correct.

3. Three sixth-grade classes raised $25.50, $49.75, and $37.25 for their classroom libraries. They agreed to share the money raised equally. What is each class's equal share? Explain or show your reasoning.

4. In her English class, Mai's teacher gives 4 quizzes each worth 5 points. After 3 quizzes, she has the scores 4, 3, and 4. What does she need to get on the last quiz to have a mean score of 4? Explain or show your reasoning.

5. An earthworm farmer examined two containers of a certain species of earthworms so that he could learn about their lengths. He measured 25 earthworms in each container and recorded their lengths in millimeters.

   Here are histograms of the lengths for each container.
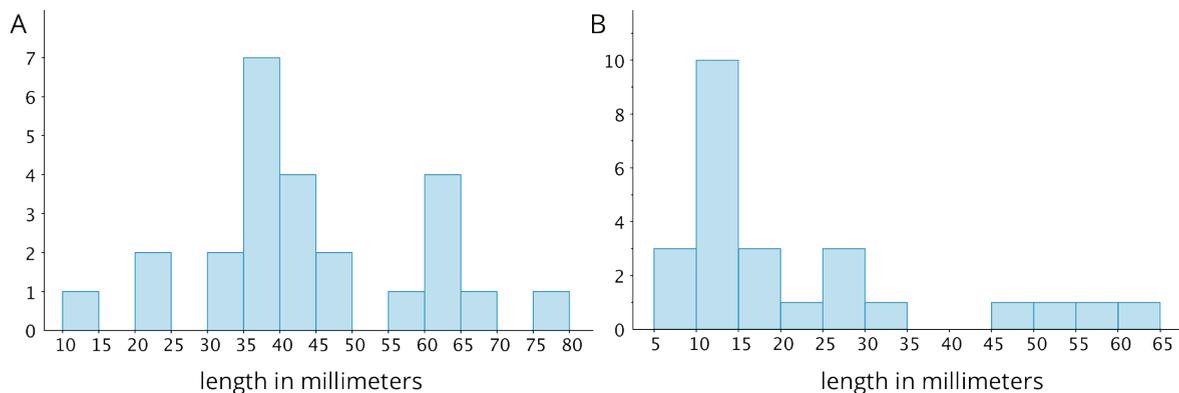


   a. Which container tends to have longer worms than the other container?

   b. For which container would 15 millimeters be a reasonable description of a typical length of the worms in the container?

   c. If length is related to age, which container had the most young worms?

   (From Unit 8, Lesson 7.)

6. Diego thinks that $x = 3$ is a solution to the equation $x^2 = 16$. Do you agree? Explain or show your reasoning.

   (From Unit 6, Lesson 15.)

**Grade 6 Unit 8**
Lesson 9

CC BY Open Up Resources. Adaptations CC BY IM.

2