NAME _____ DATE _____ PERIOD _____

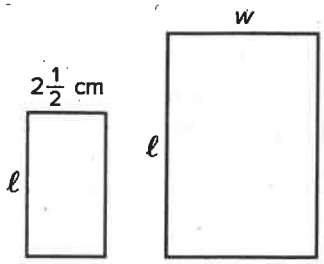
Lesson 5 Multi-Step Problem Solving

Multi-Step Example

Pierre uses two rectangular pieces of paper as bookmarks. The width of the larger bookmark is equal to the length of the smaller bookmark. The length of the larger bookmark is equal to half the perimeter of the smaller bookmark which is 14 inches. What is the perimeter of the larger bookmark? **7.EE.4a,** MP **2**

Ⓐ 32 in.
Ⓑ 30 in.
Ⓒ 26 in.
Ⓓ 23 in.

Pierre's Bookmarks



Use a problem-solving model to solve this problem.

1 Understand

Read the problem. Circle the information you know.
Underline what the problem is asking you to find.

2 Plan

What will you need to do to solve the problem? Write your plan in steps.

Step 1 Use the perimeter to determine the _____ of the smaller bookmark.

Step 2 Determine the _____ of the larger bookmark.

3 Solve

Use your plan to solve the problem. Show your steps.

Determine the length of the smaller bookmark.

$14 = 2\left(2\frac{1}{2}\right) + 2(\ell)$ $\ell =$ _____

Determine the perimeter of the larger bookmark. The length is 7 inches, half of 14 inches.

$P = 2(\_\_\_) + 2(7)$ $P =$ _____

The perimeter of the larger bookmark is ____ inches.

So, the correct answer is ____. Fill in that answer choice.

Read to Succeed!

Use the width of the smaller bookmark to solve the equation for the larger bookmark to determine the perimeter.

4 Check

How do you know your solution is accurate?

_____

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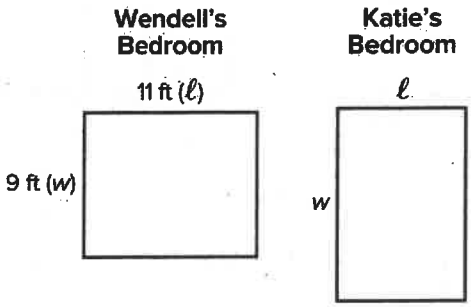
NAME _____ DATE _____ PERIOD _____

Lesson 5 *(continued)*

Use a problem-solving model to solve each problem.

1 Wendell and Katie have bedrooms with the same perimeter. Katie's bedroom has a width $1\frac{1}{3}$ times the width of Wendell's bedroom. How many feet long is Katie's bedroom? **7.EE.4a,** MP **2**



Ⓐ 8 ft
Ⓑ 10 ft
Ⓒ 12 ft
Ⓓ 14 ft

2 Diego and two friends are going skating and will choose between two skating rinks. Skate-O-Rama charges $5 admission plus a skate rental fee, which comes to $20.25 for Diego and his friends. Ice Stars charges one dollar less for admission but twice the skate rental fee. If all three friends plan to rent skates, how much more will they spend, in dollars, at Ice Stars than at Skate-O-Rama? **7.EE.4a,** MP **1**

_____

3 Ella solved the equation $0.5(3 + x) = 2.5$ and then the equation $0.25(4 + y) = x$. If the value of x is the same for both equations, what is the value of y? **7.EE.4,** MP **1**

_____

4 **H.O.T. Problem** Write and solve a real-world problem based on the equation $5(1\frac{3}{8} + x) = 8\frac{3}{4}$. **7.EE.4,** MP **4**

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