NAME _____ DATE _____ PERIOD _____

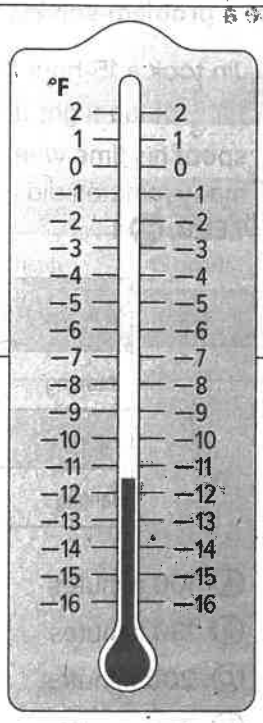
Lesson 6 Multi-Step Problem Solving

Multi-Step Example

The thermometer shows the temperature in Badger, Minnesota, at 10 P.M. The temperature decreased by $\frac{1}{3}$ of its absolute value by 4 A.M. What is the final temperature, to the nearest degree Fahrenheit? 7.EE.3, MP 1

Ⓐ −4 Ⓒ −15

Ⓑ −8 Ⓓ −19



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 Determine _____ of the absolute value of _____.

Step 2 Then _____ the product from the current temperature.

3 Solve

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

Determine the product. Then subtract from the current temperature.

$11\frac{1}{2} \times \frac{1}{3} =$ _____

_____ − _____ = _____ Subtract.

The final temperature was about _____ degrees Fahrenheit.

The correct answer is _____. Fill in that answer choice.

Read to Succeed!

The final temperature decreased, which means the absolute value of the final temperature will be greater than the absolute value of the original temperature.

4 Check

How do you know your solution is accurate?

_____

_____

_____

NAME _____ DATE _____ PERIOD _____

Lesson 6 *(continued)*

Use a problem-solving model to solve each problem.

1 Jin took a 15-hour flight to Korea. He slept for $\frac{1}{3}$ of the flight. The table shows how Jin spent his time when he was awake. How many minutes did he spend talking? **7.EE.3,** MP **1**

Activity	Fraction of Time Awake
Reading	$\frac{1}{2}$
Eating	$\frac{1}{6}$
Talking	$\frac{1}{3}$

Ⓐ 100 minutes
Ⓑ 180 minutes
Ⓒ 200 minutes
Ⓓ 300 minutes

2 The table shows the number of miles for each segment of a triathlon. Lina trained on a team of 5 people. Each person completed each segment of the race. How many total yards did her team swim? **7.EE.3,** MP **6**

Activity	Distance (miles)
Swim	$2\frac{2}{5}$
Bike ride	112
Run	$26\frac{1}{5}$

3 Rectangle 1 has a length of $2\frac{1}{2}$ inches and a width of $\frac{1}{3}$ inch. Rectangle 2 is created by multiplying each side by a factor of $1\frac{1}{2}$. Determine how many more square inches the new area is than the original area. **7.EE.3,** MP **2**

4 **H.O.T. Problem** The circle graph shows the breakdown of Seth's math grade. His quiz grade consists of 6 quizzes, each worth equal amounts. He missed $\frac{1}{10}$ of the possible points on his first quiz. What fraction of his overall grade do the missed points represent? Which is worth a greater fraction of his grade, Quizzes and Homework or Quizzes and Tests? Explain. **7.NS.3,** MP **1**