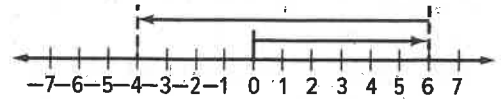


Lesson 1 Multi-Step Problem Solving

Multi-Step Example

Doug is playing a game and has a score of 6. He draws a card that reads, "Lose 10 points." What is his score now? *Preparation for 7.NS.3, MP 4*



- (A) -10
- (B) -4
- (C) 4
- (D) 10

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** Identify the integer that represents Doug's score before he draws the "Lose 10 points" card.
- Step 2** Represent "Lose 10 points" as a negative integer.
- Step 3** Use $|-10|$ to find Doug's new score.

Read to Succeed!



A number's absolute value is its distance from zero on the number line. Read $|n|$ as "the absolute value of n ."

3 Solve

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

The integer _____ represents Doug's score. The integer _____ represents the points he loses. $|-10| =$ _____.

Since this is a loss, count 10 spaces to the _____ of 6.

So, the integer _____ represents Doug's new score.

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

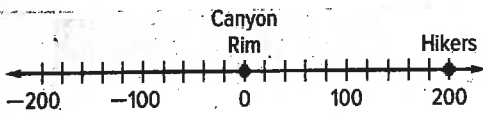
4 Check

How do you know your solution is accurate?

Lesson 1 *(continued)*

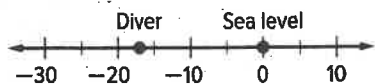
Use a problem-solving model to solve each problem.

- 1 A group of hikers start their hike on a trail 200 feet above the rim of a canyon. They walk 320 feet down the trail into the canyon. Which integer represents the hikers' elevation (in feet) below the rim of the canyon? *Preparation for 7.NS.3, MP 4*



- (A) 520
- (B) 180
- (C) -120
- (D) -320

- 3 The number line shows the position of a diver below the surface of the water. The diver descends another 8 feet. Write an absolute value expression that shows the total number of feet the diver descended. How many feet did the diver descend below the surface of the water? *Preparation for 7.NS.3, MP 4*



- 2 Rebecca recorded the temperature every 3 hours from 6:00 A.M. to 6 P.M. The table shows her results. Between which two consecutive time periods can the temperature change be represented as a negative integer? Explain your answer in terms of comparing integers. *Preparation for 7.NS.3, MP 6*

Time	Temperature (°F)
6:00 A.M.	-10
9:00 A.M.	-3
12:00 P.M.	7
3:00 P.M.	12
6:00 P.M.	8

- 4 **H.O.T. Problem** If $|x| = 15$ and $|y| = 15$, do x and y have the same value? Support your reasoning. *Preparation for 7.NS.3, MP 3*

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