Independent Practice

eHelp

Write an integer for each situation. Explain the meaning of zero in each situation. (Examples 1–3)

1. 3 miles below sea level _____

2. earning $45 _____

3. moving back 5 spaces on a game board _____

_____

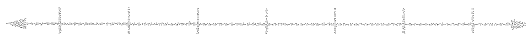**Graph each integer or set of integers on a number line.** (Examples 4–6)

4. −5

5. {2, −3, 0, 1}

6. The data set {+4, −1, −2, 0} shows a change in number of state representatives for four states after the last census. Graph the change in number of representatives. Explain the meaning of zero in this situation. (Example 7)

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_____

7. **PS Use Math Tools** The table shows the record low temperatures for several states. Graph the temperatures on a number line.
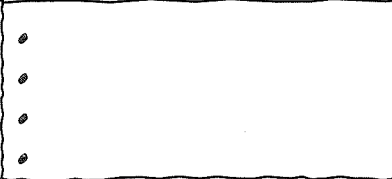

Record Low Temperature by State (°F)				
AL	AK	CT	NJ	VA
−27	−29	−32	−34	−30

8. **PS Use Math Tools** The table shows the number of points earned for each action in a video game. While playing the video game, Kevin fell in water, jumped over a rock, touched a cactus and climbed a mountain. Graph the number of points he earned for each action on the number line.

Action	Points
fall in water	−10
walk over a bridge	+5
climb mountain	+10
jump over rock	+5
walk through quicksand	−15
touch cactus	−15

9. **(PS) Model with Mathematics** Complete the graphic organizer by writing words or symbols used to represent positive and negative integers.

Positive Integer	Negative Integer
•	•
•	•
•	•
•	•

H.O.T. Problems Higher Order Thinking

10. **(PS) Persevere with Problems** A football team receives the ball on their own 10 yard line.

   a. They make a gain of 15 yards in the first play. What yard line is the ball on?

   b. What represents zero in this situation? Explain.

11. **(PS) Justify Conclusions** The temperature outside is 15°F. If the temperature drops 20°, will the outside temperature be represented by a positive or negative integer? Explain your reasoning.

12. **(PS) Identify Structure** Describe the characteristics of each set of numbers that make up the set of integers.

13. **(PS) Reason Inductively** Explain how to find the distance between −2 and 3 on a number line.