Practice & Problem Solving ✏️ ⏻
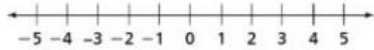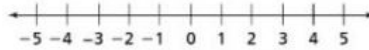
Leveled Practice For 7–9, use a number line to help find the sum.

7. $5 + (-3)$ is ☐ units from 5, in the ☐ direction.

Use the number line to find $5 + (-3)$

```
←—+——+——+——+——+——+——+——+——+——+——+—→
 -5  -4  -3  -2  -1   0   1   2   3   4   5
```

8. $-1 + (-3)$ is ☐ units from -1, in the ☐ direction.

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←—+——+——+——+——+——+——+——+——+——+——+—→
 -5  -4  -3  -2  -1   0   1   2   3   4   5
```

9. In City A, the temperature rises 9° from 8 A.M. to 9 A.M. Then the temperature drops 8° from 9 A.M. to 10 A.M. In City B, the temperature drops 5° from 8 A.M. to 9 A.M. Then the temperature drops 4° from 9 A.M. to 10 A.M.

☐   ☐

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←—++++++++++—→        ←—++++++++++—→
  0  2  4  6  8  10     -10 -8 -6 -4 -2  0
```

a. What expression represents the change in temperature for City A?

b. What integer represents the change in temperature for City A?

c. What expression represents the change in temperature for City B?

d. What integer represents the change in temperature for City B?

e. Which city has the greater change in temperature from 8 A.M. to 10 A.M.?

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10. An airplane flying at an altitude of 30,000 feet flies up to avoid a storm. Immediately after passing the storm, the airplane returns to its original altitude.

a. What integer represents the airplane's change in altitude to avoid the storm?

b. What integer represents the airplane's change in altitude immediately after passing the storm?

c. **Use Appropriate Tools** Draw a number line to represent the airplane's change in altitude.

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←—+——+——+——+——+——+——+——+—→
30,000      34,000      38,000
```

The airplane flies up to 38,000 feet to avoid a storm.

11. A deep-sea diver dives 81 feet from the surface. He then dives 14 more feet. The diver's depth can be represented by $-81 + (-14)$. What is the diver's present location?

12. Rena's rowboat drifts 23 feet from shore, followed by 9 more feet. The rowboat's current position can be represented by $-23 + (-9)$. What integer represents the rowboat's position?

13. Critique Reasoning A submarine traveling 200 meters below the surface of the ocean increases its depth by 45 meters. Adam says that the new location of the submarine is -155 meters. Describe an error Adam could have made that would result in the answer he gave.

14. Kim has $45 to spend for a day at the zoo. She pays $17 for admission, $8 for lunch, and $4 for a snack.

  a. Model with Math Use integers to write an addition expression that represents the amount of money Kim has left.

  b. Kim goes to the gift shop and finds a T-shirt she likes for $19. Does she have enough money to buy the T-shirt? Explain.

15. Higher Order Thinking Samantha has $300 for guitar lessons to learn her favorite song. Mrs. Jones charges $80 per lesson and requires three lessons to teach Samantha the song. Mr. Beliz charges $62 per lesson and will require four lessons to teach Samantha the song. Use integers to represent what each teacher charges. Which is the better deal for Samantha?

✅ **Assessment Practice**

16. A fish swims at 10 ft below sea level, and then swims another 10 ft deeper to avoid a shark. Write an addition expression that represents this situation.

17. The temperature drops 10 degrees and then rises 10 degrees. Write an addition expression that represents this situation.