

2.R.1 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement will be true. (**Note:** There may be more than one acceptable change.)

1. If -8 lies to the right of a number on a number line, then -8 is less than that number.
2. All whole numbers have an opposite number.
3. All whole numbers are also integers.
4. The absolute value of a positive number is a positive number.

Practice

Graph each set of integers on a number line.

5. $\{-3, -1, 1\}$
6. $\{-5, -4, -3, -2, 0, 1\}$

Fill in each blank with the appropriate symbol that will make the statement true: $<$, $>$, or $=$.

7. $4 \underline{\quad} 6$

8. -20 ___ -19

9. Simplify $|-4|$

10. List the possible values of x for $|x| = 5$

Applications

Represent each quantity with a signed integer.

11. The Alvin is a manned deep-ocean research submersible that has explored the wreck of the Titanic. The operating depth of the Alvin is 4500 meters below sea level.

12. Mount Everest is considered to be the highest mountain on Earth. Its peak reaches to a height of approximately 8844 meters.

Writing and Thinking

13. Explain, in your own words, how an expression such as $-y$ might represent a positive number.

14. Compare and contrast absolute value with opposites.