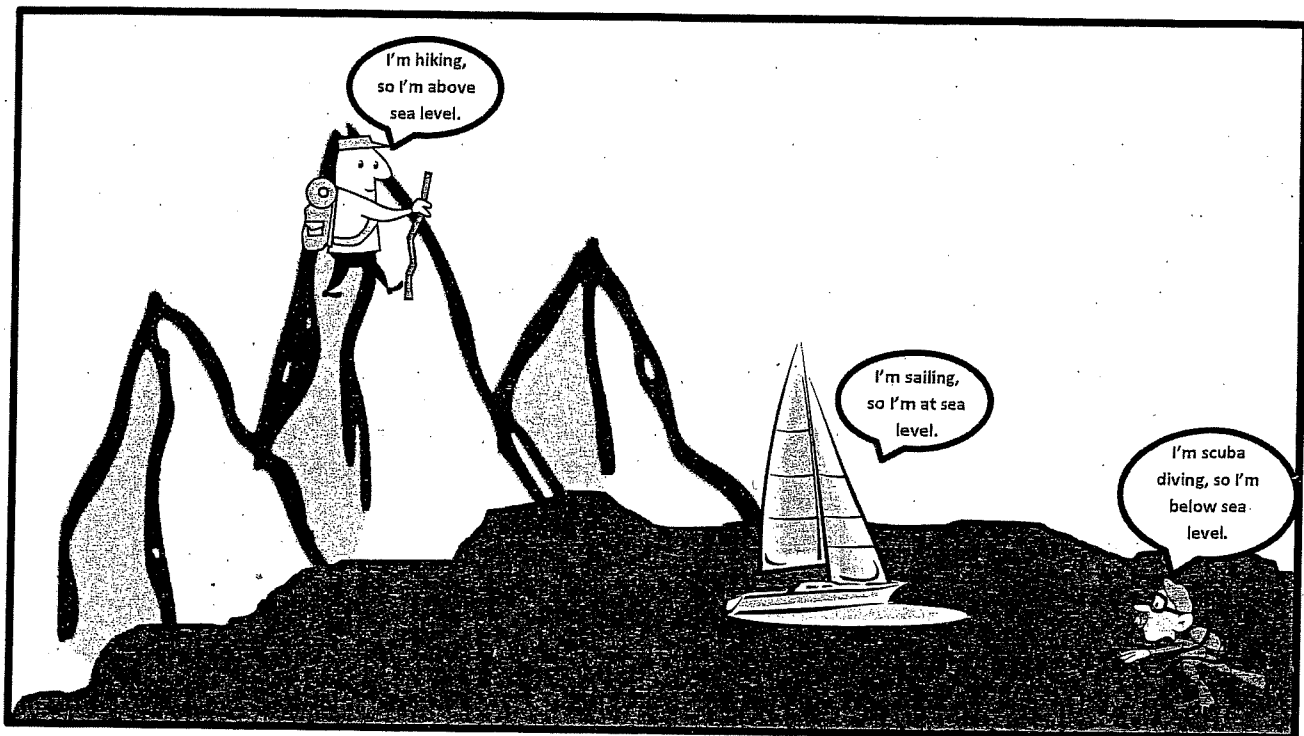


Lesson 3: Real-World Positive and Negative Numbers and Zero

Classwork

Example 1: A Look at Sea Level

The picture below shows three different people participating in activities at three different elevations. With a partner, discuss what you see. What do you think the word *elevation* means in this situation?



Exercises

Refer back to Example 1. Use the following information to answer the questions.

- The scuba diver is 30 feet below sea level. -30 feet
- The sailor is at sea level. 0
- The hiker is 2 miles (10,560 feet) above sea level. 2 miles or $10,560$ feet

1. Write an integer to represent each situation.

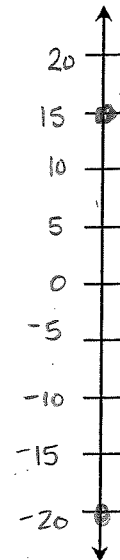
2. Use an appropriate scale to graph each of the following situations on the number line to the right. Also, write an integer to represent both situations.

a. A hiker is 15 feet above sea level.

15 feet

b. A diver is 20 feet below sea level.

-20 feet.



3. For each statement, there are two related statements: (i) and (ii). Determine which related statement ((i) or (ii)) is expressed correctly, and circle it. Then, correct the other related statement so that both parts, (i) and (ii), are stated correctly.

a. A submarine is submerged 800 feet below sea level.

i. The depth of the submarine is -800 feet below sea level.

The depth of the submarine is 800 feet below sea level.

ii. 800 feet below sea level can be represented by the integer -800 .

b. The elevation of a coral reef with respect to sea level is given as -150 feet.

i. The coral reef is 150 feet below sea level.

ii. The depth of the coral reef is -150 feet below sea level.

The depth of the coral reef is 150 feet below sea level.