

# Assignment

## Write

Define the term *zero pair* in your own words.

## Remember

You can change any subtraction problem to an addition problem without changing the answer. Subtracting two integers is the same as adding the opposite of the subtrahend, the number you are subtracting.

## Practice

- Draw both a model using two-color counters and a model using a number line to represent each number sentence. Then, determine the difference.
  - $-8 - (-5)$
  - $-4 - 9$
  - $2 - (-8)$
  - $3 - 12$
- Determine each difference without using a number line.

a. $7 - (-13)$	b. $10 - (-1)$
c. $-16 - 3$	d. $-9 - 7$
e. $-1 - (-2)$	f. $-5 - (-5)$
g. $19 - (-19)$	h. $-8 - (-8)$
i. $40 - (-20)$	j. $-800 - (-300)$
- The highest temperature ever recorded on Earth was  $136^{\circ}$  F at Al Aziziyah, Libya, in Africa. The lowest temperature ever recorded on Earth was  $-129^{\circ}$  F at Vostok Station in Antarctica. Plot each temperature as an integer on a number line, and use absolute value to determine the difference between the two temperatures.
- The highest point in the United States is Mount McKinley, Alaska, at about 6773 yards above sea level. The lowest point in the United States is the Badwater Basin in Death Valley, California, at about 87 yards below sea level. Plot each elevation as an integer on a number line, and use absolute value to determine the number of yards between in the lowest and highest points.

## Stretch

- Determine each difference without using a number line.
  - $3.1 - (-3.3)$
  - $-8.3 - 8.8$
  - $42.5 - 45.6$
  - $-28.4 - (-79.5)$
- The deepest point in the ocean is the Marianas Trench in the Pacific Ocean at about 6.9 miles below sea level. The highest point in the world is Mount Everest in the Himalayan Mountains at about 5.5 miles. Plot each elevation as an rational number on a number line, and use absolute value to determine the number of miles between the deepest point in the ocean and the highest point in the world.

## Review

- The city of Nashville, Tennessee, constructed an exact replica of the Parthenon. In 1982, construction began on a sculpture of Athena Parthenos, which stands 41 feet 10 inches tall.
  - The sculptor first made a 1 : 10 model from clay. This means that 1 inch on the model is equal to 10 inches on the real statue. What was the height of the clay model?
  - Later the sculptor made a 1 : 5 model. This means that 1 inch on the model is equal to 5 inches on the real statue. What was the height of the model?
- Write and solve a proportion to answer each problem. Show all your work.
  - Tommy types 50 words per minute, with an average of 3 mistakes. How many mistakes would you expect Tommy to make if he typed 300 words? Write your answer using a complete sentence.
  - Six cans of fruit juice cost \$2.50. Ned needs to buy 72 cans for a camping trip for the Outdoor Club. How much will he spend?
- Solve each equation for  $x$ .
  - $72 = 55 + x$
  - $\frac{4}{5}x = 60$