39. **TAKS REASONING** Write a real-world problem that can be modeled by the expression $-23 - 14 - 8$. Then solve the problem.

40. **WRITING** Tell whether the associative property and the commutative property hold for subtraction. Give examples to support your answers.

41. **CHALLENGE** Let a and b be negative numbers. Tell whether the value of the expression is positive or negative. *Explain* your reasoning.

a. $|a + b|$ **b.** $-a - b$ **c.** $-|a| - |b|$ **d.** $a + b$

PROBLEM SOLVING

EXAMPLE 3 on p. 81 for Exs. 42–43

42. **VOLCANOES** Mahukona is a Hawaiian volcano whose summit has an elevation of -3600 feet. The summit once had an elevation of 800 feet. What was the change in elevation of the volcano's summit?

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43. **CAVES** The temperature inside Mammoth Cave in Kentucky is about 12.2°C year round. If the temperature outside the cave is -2.4°C, what is the change in temperature from outside to inside the cave?

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44. **FOOTBALL** In four plays a football team gains 3 yards, loses 7 yards, loses 2 yards, and gains 15 yards. How many yards did the team gain after four plays?

45. **MULTIPLE REPRESENTATIONS** In order to qualify for a girls' regional 1500 meter race, an athlete's personal best time for the season must be under the qualifying time of 5 minutes 42 seconds.

a. Writing an Equation Write an equation that expresses d as the difference of the athlete's personal best time t (in seconds) and the qualifying time (in seconds).

b. Making a Table Make a table that gives the values of d for $t = 341.7$, 343.8, 340.9, and 342.7. Which values of t in the table are under the qualifying time? How can you tell from the differences?

46. **TAKS REASONING** A trade surplus or deficit is the difference of the value of all exports and the value of all imports. A positive difference is a surplus, and a negative difference is a deficit. The table shows the values of the United States' imports and exports for the period 2000–2003.

Year	2000	2001	2002	2003
Value of exports (trillions of dollars)	1.071	1.007	0.976	1.021
Value of imports (trillions of dollars)	1.449	1.369	1.398	1.517

a. Calculate Find the trade surplus or deficit for each year.

b. Describe *Describe* any trends in the surplus or deficit over the years.