

# Chapter 1 Review Exercises

## Section 1.1

1. **Train Fare** A family of six takes a one-way trip on a train. The cost is \$60 per adult and \$45 per child. Which of the following keystroke sequences is better for finding the total cost? Explain your reasoning.

a.  $( 2 \times 60 ) + ( 4 \times 45 ) =$

b.  $2 \times ( 60 + 4 \times 45 ) =$

2. **Seating** The seating area of a passenger car on a high-speed train is in the shape of a rectangle. It has a length of 70 feet and a width of 9 feet. Estimate how many seats can fit in the passenger car. Explain your reasoning.



**High-speed Rail** In Exercises 3–6, use the facts about high-speed rail in China.



- In 2010, a Chinese passenger train hit a record speed of 302 miles per hour during a test run.
- It reached the top speed on a segment of the 824-mile-long line.
- The line is expected to open in 2012 and will halve the current travel time between Beijing and Shanghai to five hours.
- China already has the world's longest high-speed rail network, and it plans to cover 8125 miles by 2012 and 10,000 miles by 2020.

3. At its top speed, about how long does it take the passenger train to travel 1050 miles?
4. How long did it take to travel between Beijing and Shanghai before 2012?
5. From 2012 to 2020, about how many miles per year does China plan to expand its high-speed rail network?
6. The track distance between Beijing and Shanghai is 819 miles. Why do you think it takes five hours to make this trip?