

**PROBLEM SOLVING WORKSHOP**  
LESSON 5.2

Using **ALTERNATIVE METHODS**

TEKS *a.6, A.1.D, A.5.C, A.6.B*



**Another Way to Solve Example 5, page 295**

**MULTIPLE REPRESENTATIONS** In Example 5 on page 295, you saw how to solve a problem about BMX racing using an equation. You can also solve this problem using a graph or a table.

**PROBLEM**

**BMX RACING** In Bicycle Moto Cross (BMX) racing, racers purchase a one year membership to a track. They also pay an entry fee for each race at that track. One racer paid a total of \$125 after 5 races. A second racer paid a total of \$170 after 8 races. How much does the track membership cost? What is the entry fee per race?

**METHOD 1**

**Using a Graph** One alternative approach is to use a graph.

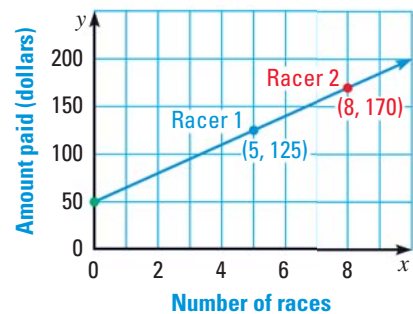
**STEP 1** Read the problem. It tells you the number of races and amount paid for each racer. Write this information as ordered pairs.

Racer 1: (5, 125)

Racer 2: (8, 170)

**STEP 2** Graph the ordered pairs. Draw a line through the points.

The y-intercept is 50.  
So, the track membership is \$50.



**STEP 3** Find the slope of the line. This is the entry fee per race.

$$\text{Fee} = \frac{45 \text{ dollars}}{3 \text{ races}} = \$15 \text{ per race}$$

