1.1 Walking Marathons
Finding and Using Rates

Ms. Chang's class decides to participate in a walkathon. Each participant must find sponsors to pledge a certain amount of money for each kilometer the participant walks. Leanne suggests that they determine their walking rates in meters per second so they can make predictions.

- Do you know what your walking rate is?
- How can you determine your walking rate?

Problem 1.1

One way to define your walking rate is the distance you walk for every second of walking time.

To determine your walking rate:

- Line up ten meter sticks, end to end (or mark off 10 meters), in the hall of your school.
- Have a partner time your walk.
- Start at one end and walk the length of the ten meter sticks using your normal walking pace.

A What is your walking rate in meters per second?

B Assume you continue to walk at this constant rate.

1. How long would it take you to walk 500 meters?
2. How far could you walk in 30 seconds? In 10 minutes? In 1 hour?
3. Describe in words the distance in meters you could walk in a given number of seconds.
4. Write an equation that represents the distance d in meters that you could walk in t seconds if you maintain this pace.
5. Use the equation to predict the distance you would walk in 45 seconds.

ACE Homework starts on page 16.