Problem 2.2

A For each brother in Problem 2.1:

1. Make a table showing the distance from the starting line at several different times during the first 40 seconds. How can the table be used to find the length of the race?
2. Graph the time and the distance from the starting line on the same set of axes. How can the graph be used to find the length of the race?
3. Write an equation representing the relationship between time and distance. Explain what information each variable and number represents.
4. How does the walking rate of each brother show up in the graph, the table, and the equation?

B

1. How far does Emile walk in 20 seconds?
2. After 20 seconds, how far apart are the brothers? How is this distance represented in the table and on the graph?
3. Is the point (26, 70) on either graph?
4. When will Emile overtake Henri? Explain.

C How can you determine which of two lines will be steeper from

1. a table of the data?
2. an equation?

D

1. At what points do Emile's and Henri's graphs cross the y-axis?
2. What information do these points represent in terms of the race?
3. How can these points be found in a table? In an equation?