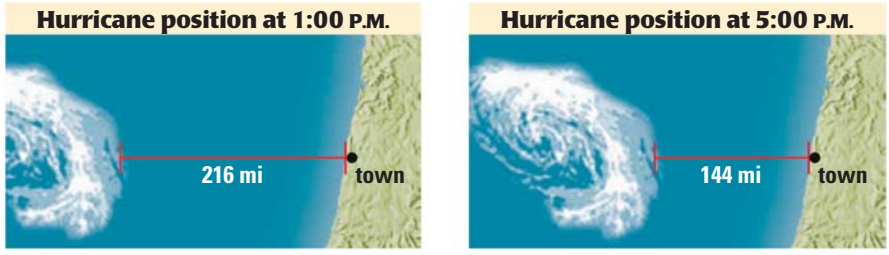
53. **MULTIPLE REPRESENTATIONS** A hurricane is traveling at a constant speed on a straight path toward a coastal town, as shown below.



a. Writing an Equation Write an equation that gives the distance (in miles) of the hurricane from the town as a function of the number of hours since 12:00 P.M.

b. Drawing a Graph Graph the equation from part (a). *Explain* what the slope and the y-intercept of the graph mean in this situation.

c. Describing in Words Predict the time at which the hurricane will reach the town. Your answer should include the following information:

- an explanation of how you used your equation
- a description of the steps you followed to obtain your prediction

54. **CHALLENGE** An in-line skater practices at a race track. In two trials, the skater travels the same distance going from a standstill to his top racing speed. He then travels at his top racing speed for different distances.

Trial number	Time at top racing speed (seconds)	Total distance traveled (meters)
1	24	300
2	29	350

a. Model Write an equation that gives the total distance traveled (in meters) as a function of the time (in seconds) at top racing speed.

b. Justify What do the rate of change and initial value in your equation represent? *Explain* your answer using unit analysis.

c. Predict One lap around the race track is 200 meters. The skater starts at a standstill and completes 3 laps. Predict the number of seconds the skater travels at his top racing speed. *Explain* your method.

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

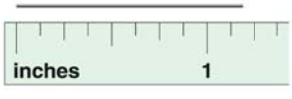
REVIEW Lesson 4.4; TAKS Workbook

55. **TAKS PRACTICE** Find the slope of the line $-4x - y = -1$. *TAKS Obj. 3*

(A) -4 (B) $\frac{1}{4}$ (C) 1 (D) 4

REVIEW TAKS Preparation p. 198; TAKS Workbook

56. **TAKS PRACTICE** Which of the following is the best estimate for the length of the piece of wire shown? *TAKS Obj. 9*



(F) $1\frac{1}{8}$ in. (G) $1\frac{3}{16}$ in. (H) $1\frac{1}{4}$ in. (J) $1\frac{1}{2}$ in.