47. **TAKS REASONING** Starting at the same point in a forest, two hikers take different paths. The first hiker walks due north at a speed of 2 miles per hour. The second hiker walks 60° east of north at a speed of 3 miles per hour.

a. How far apart are the hikers after 1 hour?

b. The two hikers carry walkie-talkies with a range of 10 miles. After how much time are the hikers out of range of each other?

c. Suppose after two hours the first hiker stops and tells the second hiker to meet her. How long will it take the second hiker to meet the first hiker? In what direction should the second hiker walk? *Explain* your reasoning.

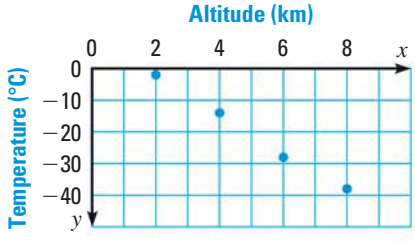
48. **CHALLENGE** An airplane flies 55° east of north from city A to city B, a distance of 470 miles. Another airplane flies 7° north of east from city A to city C, a distance of 890 miles. What is the distance between cities B and C?

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW
Lesson 2.6;
TAKS Workbook

49. **TAKS PRACTICE** The scatter plot shows the atmospheric temperature at various altitudes. What is the approximate temperature at an altitude of 5 kilometers? *TAKS Obj. 2*



Ⓐ −32°C Ⓑ −25°C

Ⓒ −20°C Ⓓ −12°C

REVIEW
Lesson 2.4;
TAKS Workbook

50. **TAKS PRACTICE** Which equation best represents the line that contains the point (4, 4) and is perpendicular to the line $y = -3x + 5$? *TAKS Obj. 7*

Ⓕ $y = 3x - 8$ Ⓖ $y = -3x + 16$

Ⓗ $y = \frac{1}{3}x + \frac{8}{3}$ Ⓙ $y = -\frac{1}{3}x + \frac{8}{3}$

QUIZ *for Lessons 13.5–13.6*

Solve $\triangle ABC$. *(pp. 882 and 889)*

1. $A = 50°, B = 74°, c = 12$

2. $C = 66°, a = 18, c = 17$

3. $a = 20, b = 14, c = 23$

4. $C = 118°, a = 26, b = 34$

5. $A = 102°, C = 25°, a = 31$

6. $a = 49, b = 52, c = 38$

7. $B = 53°, a = 41, c = 29$

8. $A = 112°, B = 48°, c = 5$

Find the area of $\triangle ABC$. *(pp. 882 and 889)*

9. $B = 94°, a = 13, c = 15$

10. $C = 18°, a = 16, b = 11$

11. $a = 18, b = 25, c = 19$

12. $a = 27, b = 21, c = 37$

13. $a = 62, b = 47, c = 53$

14. $A = 70°, b = 44, c = 36$

15. **GEOMETRY** The base of a right triangular prism has sides of length 8 centimeters, 10 centimeters, and 13 centimeters. The height of the prism is 5 centimeters. What is the volume of the prism? *(p. 889)*