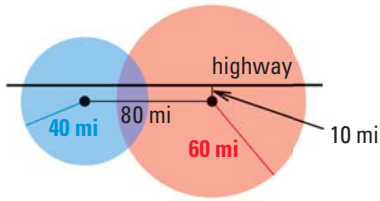
69. CHALLENGE Two radio transmitters, one with a 40 mile range and one with a 60 mile range, stand 80 miles apart. You are driving 60 miles per hour on a highway parallel to the line segment connecting the two towers. How long will you be within range of *both* transmitters simultaneously?



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW
Lesson 3.1;
TAKS Workbook

70. TAKS PRACTICE How many solutions does the system of equations below have? *TAKS Obj. 4*

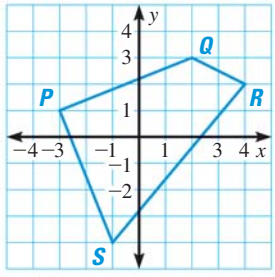
$$-12x + 3y = -27$$
$$8x - 2y = 18$$

Ⓐ None Ⓑ One Ⓒ Two Ⓓ Infinitely many

REVIEW
Lesson 9.1;
TAKS Workbook

71. TAKS PRACTICE What is the approximate perimeter of quadrilateral $PQRS$? *TAKS Obj. 7*

Ⓕ 11.7 units
Ⓖ 16.4 units
Ⓗ 20.8 units
Ⓙ 21.5 units



QUIZ *for Lessons 9.1–9.3*

Find the distance between the two points. Then find the midpoint of the line segment joining the two points. *(p. 614)*

1. (4, −3), (8, −7) **2.** (−2, 5), (4, 9) **3.** (−5, 1), (−4, 8)

4. (1, 2), (7, 1) **5.** (−6, −5), (−1, 8) **6.** (3, −2), (6, 5)

Write the standard form of the equation of the parabola with the given focus and vertex at (0, 0). *(p. 620)*

7. (0, 3) **8.** (−2, 0) **9.** (6, 0)

10. (0, −4) **11.** (0, 5) **12.** (−1, 0)

Graph the equation. Identify the radius of the circle. *(p. 626)*

13. $x^2 + y^2 = 4$ **14.** $x^2 + y^2 = 64$ **15.** $x^2 + y^2 = 20$

16. $x^2 + y^2 = 75$ **17.** $3x^2 + 3y^2 = 48$ **18.** $6x^2 + 6y^2 = 108$

19. ASTRONOMY If the plane in which Jupiter orbits the sun is a coordinate plane with its origin at the sun and coordinates in millions of miles, then a circle through the point (350, 370) just encloses Jupiter's orbit. Imagine replacing the sun with the star KY Cygni, whose radius is about 650 million miles. Would KY Cygni contain Jupiter's orbit? *Explain.* *(p. 626)*