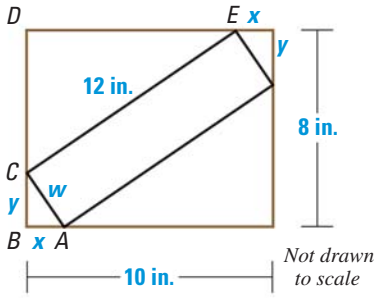
45. CHALLENGE What is the width w of the thickest box that will fit in a mailbox with the dimensions shown? (*Hint:* Use the Pythagorean theorem and the fact that $\triangle ABC \sim \triangle CDE$ to write a system of two second-degree equations.)



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW
Lesson 2.4;
TAKS Workbook

46. TAKS PRACTICE What is an equation of the line that contains the point $(-5, 2)$ and has a slope of $-\frac{4}{3}$? *TAKS Obj. 3*

Ⓐ $-4x + 3y = 26$ Ⓑ $-3x + 4y = 23$

Ⓒ $4x + 3y = 7$ Ⓓ $4x + 3y = -14$

REVIEW
Lesson 1.6;
TAKS Workbook

47. TAKS PRACTICE Which inequality is the solution of $14 - 5x \leq 7x + 5$? *TAKS Obj. 4*

Ⓕ $x \leq -\frac{3}{4}$ Ⓖ $x \leq \frac{3}{4}$

Ⓗ $x \geq -\frac{3}{4}$ Ⓙ $x \geq \frac{3}{4}$

QUIZ *for Lessons 9.6–9.7*

Write an equation of the conic section. *(p. 650)*

1. Ellipse with vertices at $(3, -10)$ and $(3, 6)$ and foci at $(3, -7)$ and $(3, 3)$
2. Parabola with vertex at $(-5, 2)$ and focus at $(-5, -1)$
3. Hyperbola with foci at $(-3, 1)$ and $(6, 1)$ and vertices at $(0, 1)$ and $(3, 1)$

Classify the conic section and write its equation in standard form. Then graph the equation. *(p. 650)*

4. $9x^2 - 4y^2 - 36x - 32y - 64 = 0$
5. $-x^2 - y^2 - 4x + 12y + 129 = 0$
6. $x^2 + 6x - y + 16 = 0$
7. $12x^2 + 45y^2 + 120x + 90y - 150 = 0$

Solve the system. *(p. 658)*

8. $x + 2y^2 = -6$
   $x + 8y = 0$
9. $x^2 + 4x + y^2 + 6y = 12$
   $2x - y = 4$
10. $x^2 - y - 4 = 0$
    $x^2 + 3y^2 - 4y - 10 = 0$
11. $y^2 - 6x - 2y - 3 = 0$
    $2y^2 - 4y + x + 6 = 0$
12. $y^2 - 4x^2 - 4y = 0$
    $2x^2 + y^2 - 8x - 4y = -8$
13. $16x^2 + 9y^2 + 32x - 18y = 119$
    $x^2 + y^2 + 2x + 6y = 15$

14. **RADAR** A radar station reports that a ship is 10 miles away. At the same time, a second station 20 miles east and 15 miles north of the first one reports that the ship is 15 miles away. Write and solve a system of equations to locate the ship relative to the first station. Is only one location possible? *Explain*. *(p. 658)*

EXTRA PRACTICE for Lesson 9.7, p. 1018 ONLINE QUIZ at classzone.com