41. CHALLENGE You make necklaces and keychains to sell at a craft fair. The table shows the time that it takes to make each necklace and keychain, the cost of materials for each necklace and keychain, and the time and money that you can devote to making necklaces and keychains.

	Necklace	Keychain	Available
Time to make (hours)	0.5	0.25	20
Cost to make (dollars)	2	3	120

a. Write and graph a system of inequalities for the number x of necklaces and the number y of keychains that you can make under the given constraints.

b. Find the vertices (corner points) of the graph.

c. You sell each necklace for \$10 and each keychain for \$8. The revenue R is given by the equation $R = 10x + 8y$. Find the revenue for each ordered pair in part (b). Which vertex results in the maximum revenue?

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW
Lesson 3.8; TAKS Workbook

42. TAKS PRACTICE The cost of renting a condominium for a week at a resort is described by the function $f(n) = 800 + 75(n - 1)$, where $f(n)$ is the cost and n is the number of people staying in the condominium. If a maximum of 7 people can stay in the condominium, what is the most a group can pay for the condominium for one week? *TAKS Obj. 4*

Ⓐ \$1,150 Ⓑ \$1,250 Ⓒ \$1,325 Ⓓ \$1,400

REVIEW
Skills Review Handbook p. 936; TAKS Workbook

43. TAKS PRACTICE Susan believes that $(xy)^2 \geq xy$ for all values of x and y. Which pair of values for x and y could be used to disprove Susan's theory? *TAKS Obj. 10*

Ⓕ $x = -1, y = -1$ Ⓖ $x = -1, y = 1$

Ⓗ $x = 0, y = 1$ Ⓙ $x = 1, y = \frac{1}{2}$

QUIZ *for Lessons 7.5–7.6*

Graph the linear system. Then use the graph to tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*. *(p. 459)*

1. $x - y = 1$
$x - y = 6$

2. $6x + 2y = 16$
$2x - y = 2$

3. $3x - 3y = -2$
$-6x + 6y = 4$

Graph the system of linear inequalities. *(p. 466)*

4. $x > -3$
$x < 7$

5. $y \leq 2$
$y < 6x + 2$

6. $4x \geq y$
$-x + 4y < 4$

7. $x + y < 2$
$2x + y > -3$
$y \geq 0$

8. $y \geq 3x - 4$
$y \leq x$
$y \geq -5x - 15$

9. $x > -5$
$x < 0$
$y \leq 2x + 7$