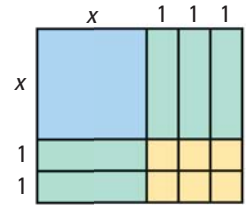
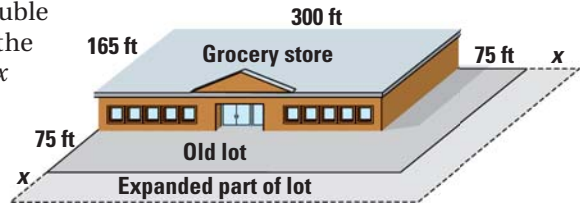


68. **MULTIPLE REPRESENTATIONS** Use the diagram shown.



- a. **Writing an Expression** Write a quadratic trinomial that represents the area of the diagram.
- b. **Describing a Model** Factor the expression from part (a). *Explain* how the diagram models the factorization.
- c. **Drawing a Diagram** Draw a diagram that models the factorization  $x^2 + 8x + 15 = (x + 5)(x + 3)$ .
69. **SCHOOL FAIR** At last year's school fair, an 18 foot by 15 foot rectangular section of land was roped off for a dunking booth. The length and width of the section will each be increased by  $x$  feet for this year's fair in order to triple the original area. Write and solve an equation to find the value of  $x$ . What is the length of rope needed to enclose the new section?
70. **RECREATION CENTER** A rectangular deck for a recreation center is 21 feet long by 20 feet wide. Its area is to be halved by subtracting the same distance  $x$  from the length and the width. Write and solve an equation to find the value of  $x$ . What are the deck's new dimensions?
71. **TAKS REASONING** A square garden has sides that are 10 feet long. A gardener wants to double the area of the garden by adding the same distance  $x$  to the length and the width. Write an equation that  $x$  must satisfy. Can you solve the equation you wrote by factoring? *Explain* why or why not.
72. **CHALLENGE** A grocery store wants to double the area of its parking lot by expanding the existing lot as shown. By what distance  $x$  should the lot be expanded?

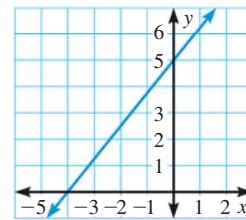


**MIXED REVIEW FOR TAKS** **TAKS PRACTICE** at classzone.com

**REVIEW**  
Lesson 2.2;  
TAKS Workbook

73. **TAKS PRACTICE** What is the slope of the line shown? **TAKS Obj. 3**

- (A)  $-\frac{5}{4}$                       (B)  $-\frac{4}{5}$   
(C)  $\frac{4}{5}$                          (D)  $\frac{5}{4}$



**REVIEW**  
Lesson 2.3;  
TAKS Workbook

74. **TAKS PRACTICE** Which of the following best describes the graphs of the equations below? **TAKS Obj. 7**

$$y = 3x - 2$$

$$-4y = x + 8$$

- (F) The lines have the same  $x$ -intercept.  
(G) The lines have the same  $y$ -intercept.  
(H) The lines are perpendicular to each other.  
(J) The lines are parallel to each other.