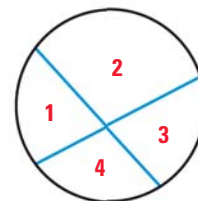


51. **MAKE A REASON** The Garabit Viaduct in France has a parabolic arch as part of its support. Three points on the parabola that models the arch are  $(0, 0)$ ,  $(40, 38.2)$ , and  $(165, 0)$  where  $x$  and  $y$  are measured in meters. Which point is also on the parabola?

(A)  $(10, -11.84)$     (B)  $(26.74, 25)$     (C)  $(80, 51.95)$     (D)  $(125, 45)$

52. **CHALLENGE** Let  $R$  be the maximum number of regions into which a circle can be divided using  $n$  chords. For example, the diagram shows that  $R = 4$  when  $n = 2$ . Copy and complete the table. Then write a quadratic model giving  $R$  as a function of  $n$ .



$n$	0	1	2	3	4	5	6
$R$	?	?	4	?	?	?	?



## MIXED REVIEW FOR TAKS

**TAKS PRACTICE** at classzone.com

### REVIEW

Skills Review  
Handbook p. 998;  
TAKS Workbook

53. **TAKS PRACTICE** Charlie receives some money for his birthday. He deposits one third of the money in the bank. He purchases a concert ticket for \$45. Then he spends half of the remaining money on dinner. Charlie has \$8.50 left. How much money did he receive for his birthday? **TAKS Obj. 10**

(A) \$80    (B) \$93    (C) \$118    (D) \$124

### REVIEW

Lesson 2.3;  
TAKS Workbook

54. **TAKS PRACTICE** Which equation represents a line that is parallel to the line that passes through  $(-4, 9)$  and  $(5, -3)$ ? **TAKS Obj. 7**

(F)  $-4x + 3y = 29$     (G)  $2x + 3y = 9$   
(H)  $4x + 3y = -12$     (J)  $2x - 3y = 11$

## QUIZ for Lessons 4.8–4.10

Use the quadratic formula to solve the equation. (p. 292)

1.  $x^2 - 4x + 5 = 0$     2.  $2x^2 - 8x + 1 = 0$     3.  $3x^2 + 5x + 4 = 0$

Graph the inequality. (p. 300)

4.  $y < -3x^2$     5.  $y > -x^2 + 2x$     6.  $y \geq -x^2 + 2x + 3$

Solve the inequality. (p. 300)

7.  $0 \geq x^2 + 5$     8.  $12 \leq x^2 - 7x$     9.  $2x^2 + 2 > -5x$

Write a quadratic function whose graph has the given characteristics. (p. 309)

10. vertex:  $(5, 7)$   
passes through:  $(3, 11)$     11.  $x$ -intercepts:  $-3, 5$   
passes through:  $(7, -40)$     12. passes through:  
 $(-1, 2), (4, -23), (2, -7)$

13. **SPORTS** A person throws a baseball into the air with an initial vertical velocity of 30 feet per second and then lets the ball hit the ground. The ball is released 5 feet above the ground. How long is the ball in the air? (p. 292)

