

9 Chapter Test



Solve the equation by graphing.

1. $x^2 - 7x + 12 = 0$

2. $x^2 + 12x = -36$

3. $x + 1 = -x^2$

Solve the equation using square roots.

4. $14 = 2x^2$

5. $x^2 + 9 = 5$

6. $(4x + 3)^2 = 16$

Solve the equation by completing the square.

7. $x^2 - 8x + 15 = 0$

8. $x^2 - 6x = 10$

9. $x^2 - 8x = -9$

10. $16 = x^2 - 16x - 20$

Solve the equation using the quadratic formula.

11. $5x^2 + x - 4 = 0$

12. $9x^2 + 6x + 1 = 0$

13. $-2x^2 + 3x + 7 = 0$

14. **REASONING** Use the discriminant to determine how many times the graph of $y = 4x^2 - 4x + 1$ intersects the x -axis.

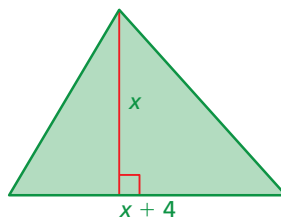
15. **CHOOSING A METHOD** Solve $x^2 - 9x - 10 = 0$ using any method. Explain your choice of method.

Solve the system.

16. $y = x^2 - 4x - 2$
 $y = -4x + 2$

17. $y = -5x^2 + x - 1$
 $y = -7$

18. **GEOMETRY** The area of the triangle is 35 square feet. Use a quadratic equation to find the length of the base. Round your answer to the nearest tenth.



19. **SNOWBOARDING** A snowboarder leaves an 8-foot-tall ramp with an upward velocity of 28 feet per second. The function $h = -16t^2 + 28t + 8$ gives the height h (in feet) of the snowboarder after t seconds. How many points does the snowboarder earn with a perfect landing?

Criteria	Scoring
Maximum height	1 point per foot
Time in air	5 points per second
Perfect landing	25 points

