9-5　Skills Practice

Solving Quadratic Equations by Using the Quadratic Formula

Solve each equation by using the Quadratic Formula. Round to the nearest tenth if necessary.

1. $x^2 - 49 = 0$ **−7, 7**

2. $x^2 - x - 20 = 0$ **−4, 5**

3. $x^2 - 5x - 36 = 0$ **−4, 9**

4. $x^2 + 11x + 30 = 0$ **−6, −5**

5. $x^2 - 7x = -3$ **0.5, 6.5**

6. $x^2 + 4x = -1$ **−3.7, −0.3**

7. $x^2 - 9x + 22 = 0$ **∅**

8. $x^2 + 6x + 3 = 0$ **−5.4, −0.6**

9. $2x^2 + 5x - 7 = 0$ **$-3\dfrac{1}{2}$, 1**

10. $2x^2 - 3x = -1$ **$\dfrac{1}{2}$, 1**

11. $2x^2 + 5x + 4 = 0$ **∅**

12. $2x^2 + 7x = 9$ **$-4\dfrac{1}{2}$, 1**

13. $3x^2 + 2x - 3 = 0$ **−1.4, 0.7**

14. $3x^2 - 7x - 6 = 0$ **$-\dfrac{2}{3}$, 3**

State the value of the discriminant for each equation. Then determine the number of real solutions of the equation.

15. $x^2 + 4x + 3 = 0$

　　4; 2 real solutions

16. $x^2 + 2x + 1 = 0$

　　0; 1 real solution

17. $x^2 - 4x + 10 = 0$

　　−24; no real solutions

18. $x^2 - 6x + 7 = 0$

　　8; 2 real solutions

19. $x^2 - 2x - 7 = 0$

　　32; 2 real solutions

20. $x^2 - 10x + 25 = 0$

　　0; 1 real solution

21. $2x^2 + 5x - 8 = 0$

　　89; 2 real solutions

22. $2x^2 + 6x + 12 = 0$

　　−60; no real solutions

23. $2x^2 - 4x + 10 = 0$

　　−64; no real solutions

24. $3x^2 + 7x + 3 = 0$

　　13; 2 real solutions

Lesson 9-5