Name _____ Date _____

Match the trinomial with its correct factorization.

1. $x^2 - 25$

2. $x^2 + 10x + 25$

3. $x^2 - 10x + 25$

A. $(x + 5)^2$

B. $(x - 5)(x + 5)$

C. $(x - 5)^2$

Factor the difference of two squares.

4. $x^2 - 1$

5. $b^2 - 81$

6. $m^2 - 100$

7. $p^2 - 225$

8. $4y^2 - 1$

9. $16n^2 - 25$

10. $9w^2 - 100$

11. $64z^2 - 36$

12. $49d^2 - 25$

13. $4r^2 - 121$

14. $9s^2 - 144$

15. $c^2 - 625$

Factor the perfect square trinomial.

16. $x^2 + 6x + 9$

17. $b^2 + 10b + 25$

18. $w^2 - 12w + 36$

19. $m^2 - 8m + 16$

20. $r^2 - 20r + 100$

21. $z^2 + 16z + 64$

22. $s^2 + 22s + 121$

23. $x^2 - 16x + 64$

24. $4c^2 + 4c + 1$

25. $16d^2 + 8d + 1$

26. $9y^2 - 6y + 1$

27. $9p^2 - 12p + 4$

Solve the equation.

28. $x^2 - 9 = 0$

29. $p^2 + 14p + 49 = 0$

30. $d^2 - 10d + 25 = 0$

31. $25m^2 - 1 = 0$

32. $r^2 - 2r + 1 = 0$

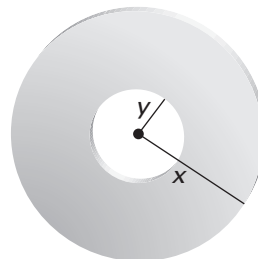**33.** $n^2 + 20n + 100 = 0$

34. $4y^2 - 9 = 0$

35. $36x^2 - 64 = 0$

36. $w^2 + 4w + 4 = 0$

37. Washers Washers are available in many different sizes.
   a. Write and factor an expression for the area of one side
      of the washer. Leave your answer in terms of π.
   b. Find the area of one side of the washer when
      $x = 8$ centimeters and $y = 3$ centimeters.

38. Cherry Tree A cherry falls from a tree branch that is 9 feet above the ground.
   a. How far above the ground is the cherry after 0.2 second?
   b. After how many seconds does the cherry reach the ground?

39. Wind Chime A wind chime falls from a roof that is 10 feet above the ground.
   a. How far above the ground is the wind chime after 0.5 second?
   b. After how many seconds does the wind chime reach the ground?