Name_____ ID: 1

5.5 Complete the Square

Date_____ Period____

Solve each equation by completing the square.

1) $x^2 - 12x - 45 = 0$

2) $v^2 + 14v - 95 = 0$

3) $k^2 + 6k - 58 = 0$

4) $m^2 - 17m + 47 = 0$

5) $n^2 + 13n - 30 = 0$

6) $x^2 - 17x + 43 = 0$

7) $x^2 - 18x + 77 = 0$

8) $x^2 + 12x - 85 = 0$

9) $n^2 - 16n + 57 = 0$

10) $2v^2 + 13v + 15 = 0$

11) $9a^2 + 13a - 92 = 0$

12) $8x^2 - 5x - 89 = 0$

Simplify.

13) $(-1 - 6i) + (2 + 3i)$

14) $(-4 - 6i) - (7 - 5i)$

15) $(-2 - i) - (-1 - 2i)$

16) $(6 - 6i) + (-8 - 6i)$

17) $(-5 + 6i)(-8 - 4i)$

18) $(5 + 6i)(-5 - 7i)$

19) $(-8 + 4i)(-8 + 2i)$

20) $(1 - 2i)(-1 - i)$

Solve each equation by factoring.

21) $r^2 + 3r - 40 = 0$

22) $x^2 - 9 = 0$

Find the discriminant of each quadratic equation then state the number and type of solutions.

23) $-p^2 - p - 6 = 3$

24) $x^2 + 6x - 1 = -10$

Solve each equation with the quadratic formula.

25) $9a^2 - 19 = 0$

26) $x^2 + 4x + 5 = 0$

Solve each equation by taking square roots.

27) $5v^2 + 2 = 382$

28) $4(x - 2)^2 + 8 = 64$