Algebra 2 Name_____

Completing the Square

Find the value that completes the square and then rewrite as a perfect square.

1) $x^2 + 36x + \_\_$

2) $a^2 - 2a + \_\_$

3) $a^2 - 4a + \_\_$

4) $x^2 + 4x + \_\_$

5) $m^2 + 18m + \_\_$

6) $x^2 + 38x + \_\_$

7) $x^2 - 24x + \_\_$

8) $x^2 - 38x + \_\_$

9) $x^2 + 20x + \_\_$

10) $a^2 + 8a + \_\_$

11) $m^2 + 22m + \_\_$

12) $p^2 - 20p + \_\_$

13) $x^2 - 32x + \_\_$

14) $x^2 + 6x + \_\_$

Solve each equation by completing the square.

15) $x^2 - 6x - 62 = 0$

16) $m^2 - 12m - 28 = 0$

17) $v^2 + 16v - 40 = 0$

18) $r^2 + 14r + 25 = 0$

19) $n^2 - 16n + 39 = 0$

20) $k^2 - 12k + 20 = 0$

21) $3x^2 + 6x - 24 = 0$

22) $8x^2 - 16x - 10 = 0$

23) $3x^2 + 12x - 11 = 0$

24) $3a^2 - 12a + 9 = 0$

25) $8k^2 + 16k - 40 = 0$

26) $4m^2 + 8m - 12 = 0$