Algebra 2 Name_____

Completing the Square

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

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

2) $a^2 - 6a + \_\_$

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

4) $x^2 + 24x + \_\_$

5) $x^2 - 26x + \_\_$

6) $p^2 + 30p + \_\_$

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

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

9) $x^2 + 28x + \_\_$

10) $n^2 + 6n + \_\_$

Solve each equation by completing the square.

11) $n^2 + 12n + 20 = 0$

12) $r^2 + 10r + 9 = 0$

13) $x^2 - 16x - 11 = 0$

14) $v^2 - 4v - 43 = 0$

15) $r^2 - 12r + 20 = 0$

16) $n^2 + 4n - 21 = 0$

17) $n^2 + 16n + 48 = 0$

18) $x^2 + 12x + 28 = 0$

19) $m^2 - 12m - 18 = 0$

20) $x^2 + 8x - 21 = 0$

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