Algebra 2 Name_____

Completing the Square Introduction

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

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

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

3) $x^2 + 32x + \_\_$

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

5) $z^2 + 14z + \_\_$

6) $x^2 + 12x + \_\_$

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

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

9) $x^2 + 15x + \_\_$

10) $x^2 + 19x + \_\_$

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

12) $x^2 + \frac{37}{18}x + \_\_$

Solve the equation by completing the square

13) $x^2 - 4x + 4 = 9$

14) $x^2 + 6x + 9 = 25$

15) $x^2 + 10x + 25 = 81$

16) $x^2 - 12x + 36 = 49$

17) $x^2 + 8x + 16 = 12$

18) $x^2 - 14x + 49 = 32$

19) $x^2 + 2x + 1 = 20$

20) $x^2 - 16x + 64 = 50$