

## FACTORING QUADRATICS - #3

Name \_\_\_\_\_

**Factor the following binomial squares:**

**Example:**  $x^2 + 10x + 25 = (x + 5)(x + 5) = (x + 5)^2$

1.  $x^2 + 12x + 36$
2.  $x^2 + 16x + 64$
3.  $y^2 - 14y + 49$
4.  $m^2 - 20m + 100$
5.  $a^2 + 8a + 16$
6.  $k^2 - 18k + 81$
7.  $x^2 + 22x + 121$
8.  $n^2 - 2n + 1$
9.  $9x^2 + 6x + 1$
10.  $9x^2 - 12x + 4$
11.  $4y^2 + 20y + 25$
12.  $4c^2 + 12c + 9$
13.  $x^2 + 6xy + 9y^2$
14.  $x^2 - 10xy + 25y^2$

**Factor the following Difference of Two Squares (sum and difference pattern):**

**Example:**  $x^2 - 9 = (x + 3)(x - 3)$

15.  $x^2 - 16$
16.  $x^2 - 49$
17.  $y^2 - 25$
18.  $h^2 - 100$
19.  $b^2 - 64$

20.  $9x^2 - 1$

2

21.  $m^2 - 36$

22.  $4y^2 - 81$

23.  $25x^2 - 9$

24.  $16x^2 - y^2$

25.  $9a^2 - 64b^2$

26.  $x^2 - 100y^2$

**Factor the following quadratics (in any form):**

**Review example:  $x^2 + 5x + 6 = (x + 3)(x + 2)$**

27.  $x^2 + 7x + 12$

28.  $x^2 + 8x + 15$

29.  $x^2 - 13x + 30$

30.  $y^2 - 14y + 45$

32.  $w^2 + 12w + 35$

33.  $h^2 - 15h + 56$

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

35.  $y^2 + y - 20$

36.  $x^2 - 2x - 24$

38.  $j^2 - 3j - 40$

39.  $x^2 + 4x + 4$

40.  $y^2 - 144$