

Name:

Date:

Period:

**Double Distributive (FOIL) Refresher:**

1.  $(y + 9)(y + 2)$

2.  $(y - 1)(y - 9)$

3.  $(y + 11)(y - 4)$

4.  $(5 - c)(9 + c)$

**Trinomial Factoring**

**First Type of Trinomial: (last term positive)**

- If the last term is **positive**, then **both** factors in your double bubble will have the **same** sign.
- That sign is the sign of the middle term.
- The #s **add** to give you the middle # and **multiply** to give you the last #.

Ex:  $x^2 + 3x + 2$

Ex:  $x^2 - 14x + 49$

Ex:  $x^2 - 11x + 10$

Ex:  $x^2 + 13x + 42$

**Second Type of Trinomial: (last term negative)**

- If the last term is **negative**, then the factors in your double bubble will have **different** signs.
- The largest factor will have the sign of the middle term.
- The #s **subtract** to give you the middle # and **multiply** to give you the last #.

Ex:  $x^2 + 9x - 36$

Ex:  $x^2 - 12x - 13$

Ex:  $x^2 - 5x - 6$

Ex:  $x^2 - 4x - 12$

Try These:

1.  $x^2 - 7x - 18$

2.  $x^2 - 5x + 6$

3.  $x^2 - 14x + 40$

4.  $x^2 - 4x - 32$

5.  $x^2 + 9x + 18$

6.  $x^2 + 11x + 18$

7.  $x^2 - 16x - 17$

8.  $x^2 + 12x + 11$

**Mixed Review (GCF, DOTS, Trinomial)**

1.  $3x^3 + 6x^2 - 5x$

2.  $x^2 - 3x - 28$

3.  $9b^2 - 64$

4.  $49x^2 - 36$

5.  $n^2 - 12n + 27$

6.  $n^2 - 15n + 56$

7.  $27ab^4 - 45a^2b^3$

8.  $25x^2y^5 + 15x^3y^4$

9.  $x^2 + 7x - 18$

10.  $25b^2 - 1$