Possible factors:

2, 2

1, 4

**Crisscross Method**

Factor: $4x^{2}-3x-10$

1. Think of pairs of numbers so that the First product is $4x^{2}$, the Last product is $-10$, and the outside and inside products combine to $-3x$.
2. Determine the products formed by the opposite corners: $-10x$ and $4x$. Their sum is $-6x$.
3. Try different combinations of First and Last number pairs until you find the ones that work.
4. To correctly write your answer, look at the rows from left to right, and fill in your parentheses.

*\*\*\*Remember: you can always check your answer by EXPANDING.*

**Two Special Cases:**

Difference of Two Squares:



Perfect Square Trinomial



Possible factors:

1, -10

-1, 10

2, -5

-2, 5

First Last

2*x* -5 = $-10x$

2*x* 2 = $4x$

 $-10x+4x=-6x$

First Last

4*x* 5 = $5x$

*x -*2 = $-8x$

$5x-8x=-3x$, so you found the correct combination of numbers!

First Last

4*x* 5 = $5x$

*x -*2 = $-8x$

 $\left(4x+5\right)(x-2)$

**Directions: Factor the following equations. Do not solve! All equations are factorable.**

**1.** ** 2.** ****

**3.** **** **4.** 81x – 1 = 0

**5.** 4x – 12x + 9 = 0  **6. **

**7.  8. **

**9.** 4x – 36 = 0 **10. **

**11.** 6x – 7x – 20 = 0 **12. **

**13**.  **14. **