Name:_____ Period:_____ Date:_____

Completing the Square

Last week, we learned about solving quadratic by completing the square. Now try it with a coefficient on the leading term:

$$2x^2 + 8x = 13$$

$$2(x^2 + 4x) = 13 \qquad \text{Factor out the GCF}$$

$$x^2 + 4x = \frac{13}{2} \qquad \text{Divide each side by 2}$$

$$x^2 + 4x + \underline{\quad} = \frac{13}{2} + \underline{\quad}$$

Find the missing number to make a perfect square trinomial $\left(\frac{b}{2}\right)^2$ and add that to each side

$$(x + \underline{\ })^2 = \frac{13}{2} + \underline{\ }$$

Completing the Square

Try it again with a coefficient on the leading term

1. $4x^2 + 8x = 96$

2. $9a^2 + 18a = 7$

3. $2n^2 - 4n - 48 = 0$

4. $3x^2 - 8x + 4 = 0$

5. $2x^2 - 5x = -67$

Wednesday

Name:_____ Period:_____ Date:_____