

**Do Now**- Factor the following:  $x(x + 4) + 5(x + 4)$

**AIM: INTRO TO FACTORING “HARD” TRINOMIALS**

**Guided Practice**

- 1) Multiply the first and last coefficients. (“headphones”)
- 2) Find factors that add or subtract to the middle term and multiply to the product of the first and last coefficients.
- 3) Rewrite the problem with 4 terms.
- 4) Factor by “Grouping”- Split problem down the middle.
- 5) Factor the 1<sup>st</sup> two terms (GCF).
- 6) Copy the ( ) on the other side.
- 7) Put the GCF of last two terms in front.
- 8) Factor using GCF- Your GCF will be a common ( ).
- 9) Check by Double Distributing.

$2x^2 + 7x + 3$  Multiply: 6 Add to: 7

$$2x^2 + 6x + 1x + 3$$
$$2x(x+3) + 1(x+3)$$

Answer  $\rightarrow (2x+1)(x+3)$

1.  $3x^2 + 10x + 8$

2.  $2x^2 + 7x + 6$

3.  $2x^2 + 7x + 3$

4.  $2x^2 + 11x + 5$