

## Two Step Factoring with a GCF:

$$6x^2 - 6x - 252$$

$$8x^7 - 88x^6 + 264x^5$$

$$3x^2 - 675$$

**Step 1: Take out the GCF**

$$6(x^2 - x - 42)$$

$$8x^5(x^2 - 11x + 30)$$

$$3(x^2 - 225)$$

**Step 2: Factor what's left (if possible) using your factoring rules:**

$$6(x+6)(x-7)$$

$$8x^5(x-6)(x-5)$$

$$3(x+15)(x-15)$$

Factor Completely:

1)  $8x^2 - 96x + 280$

2)  $x^9 - 4x^8 - 77x^7$

Check:

Check:

3)  $4x^5 + 16x^4 - 128x^3$

4)  $3x^7 - 363x^5$

Check:

Check:

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5)  $6x^{14} + 96x^{13} + 378x^{12}$

6)  $9x^2 - 36$

Check:

Check:

7)  $10x^5 - 10x^4 - 300x^3$

8)  $12x^2 + 168x - 180$

Check:

Check: