Friday 8/9/19

1. Grab a Calculator
2. Take out HW/Calendar
3. Begin Warm-up
4. Go over Warm-up
5. Factoring Notes

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don't wear vans if you don't know the square root of ANS 🤣🤣🤣
### Warm-Up:

**GCF:**

- 1) $9x^4y + 3x^2$
  - $3x^2(3xy + 1)$

**Factor the following:**

- $20x^2 - 100x + 30x - 75$
  - $20x(2x-5) + 15(2x-5)$
  - $(20x+15)(2x-5)$

### Vocabulary

- **A trinomial** is an expression that has ________ terms.
- **A quadratic** is an expression with the largest exponent of $x^2$.

**Standard Form of a Quadratic**

$$f(x) = ax^2 + bx + c$$

**The expression must be in standard form before factoring!**

- $a$ is always the coefficient of $x^2$
- $b$ is always the coefficient of $x$
- $c$ is always the constant

### Notes

**Steps when Factoring**

1: Check for a **GCF** and factor. If there is not a **GCF** then skip this step.
2: After the terms are put in **standard** form, identify $a$, $b$, and $c$.
3: Set up M-A chart.

**M-A Chart**

- Our goal is to factor by **grouping**, so we need ______ terms.
  - $M$ stands for “multiply” and $A$ stands for “add.”
  - We are looking for two numbers that multiply to $a.c$ and add to $b$.

4: Split the ________ term using the numbers that satisfy the M-A chart.

5: Factor by **grouping**.
**Topic:** Factoring Trinomials

**Examples**
Setting up the M-A Chart

1) \(2x^2 + 17x + 35\)
   - \(A = 2\)
   - \(B = 17\)
   - \(C = 35\)

Factor the following:

1) \(x^2 - 9x + 14\)
   - \(A = \frac{14}{9}\)
   - \(B = 9\)
   - \(C = 14\)

\[\frac{x^2 - 9x + 14}{x} \cdot \frac{7}{x + 2} + 7(x + 2) = (x + 7)(x + 2)\]

2) \(x^2 + x - 2\)

3) \(3x^2 - 35x - 32\)
   - \(\frac{a}{a} = -\frac{35}{32}\)

\[\frac{3x^2 - 35x - 32}{x} \cdot \frac{3x - 11}{3x - 1} + 11(3x - 1) = (x + 11)(3x - 1)\]

4) \(4x^2 - 4x - 3\)

**Summary**
Summarize the lesson in your own words