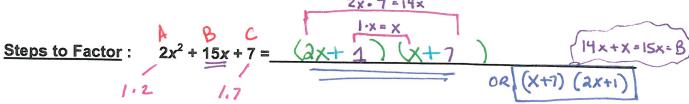
Alachua	1 Notes
Algebra	1 Notes

Date:

9.6 Factor Quadratic Equations When the Leading Coefficient IS NOT 1 **VOCABULARY:**

- Standard Form of a Quadratic Equation $A \times^2 + B \times + C = 0$ Where A, B, C are real numbers; and A + 0
- Factoring is a lot more work when a≠1

Example 1 Factor when a and c are prime number other than 1



- 1) Identify a, b, and c. a = 2 b = 15 and c = 7
- 2) Write 2 sets of ()'s. One for each factor.
- 3) What are the first terms in both factors? Why? $\frac{\partial x \cdot x}{\partial x} = \frac{\partial x^2}{\partial x}$ (the 1st term)

 4) What are the signs for each factor? Both positive since $\frac{\partial x}{\partial x} + \frac{\partial x}{\partial x} = \frac{\partial x}{\partial x}$
- 5) What are the factors of 2 and 7? Put them under the numbers
- 6) Draw brackets (multiply INNER TERMS, OUTER TERMS, and their sum must be B.
- 7) **CHECK** by Multiplying the factors

$$(2x+1)(x+7) = 2x^2 + 14x + x + 7 = 2x^2 + 15x + 7$$

CHECK POINT: Factor and Check by mentally multiplying

2)
$$2x^{2} - 11x + 5 = (2x - 1)(x - 5)$$

3) $5x^{2} + 2x - 3 = (5x - 3)(x + 1)$

OR $(x-s)(2x-1)$

Signs

1.3

OR $(x-s)(2x-1)$

Signs

1.3

OR $(x-s)(3x+1)$

Signs

Nustingle 20 (2x - 1) | 30 (2x

Algebra 1 Notes...

Example 6 Factor "-1" when the leading coefficient is negative

Steps to Factor: $-2x^2 - 11x - 5 = -1(2x^2 + 11x + 5)$

- 1) Identify a, b, and c. $a = \frac{-2}{5}$ b= $\frac{-1}{5}$ and c= $\frac{-5}{5}$
- *2) Always factor out -1 when the leading coefficient is negative. *
 - 3) Factor (the final answer must include "-1")
 - 2 ANSWERS:

Example 7 Factor when a and c are NOT prime numbers

1) Write 2 sets of ()'s. One for each factor

- What are the factors of 7 and 12? Put them under the numbers
- 3) Draw brackets
- Factor by guess and check.
- 5) Always **CHECK** by Mentally multiplying the factors !!!!!!!!!!!!!

Example 8 Solve Quadratic Equation by Factoring

Factor:

Solve:

X-2=0

Zero