

Subject: **MATHEMATICS**Date: / 4 / 2016

Name: _____

Grade: 08 _____

Factors Trinomial x^2 $\underbrace{+b}_{\text{difference}} x \underbrace{-c}_{\text{product}}$ (c is Negative)

Example: Factor the following x^2 $\underbrace{+4}_{\text{difference}} x \underbrace{-12}_{\text{product}}$

1st step: find all pairs of factors of **c = 12**

Pairs of 12	Difference = 4
(1•12)	12 - 1 = 11
(2•6)	6 - 2 = 4
(3•4)	4 - 3 = 1

2nd step: Factor using guess and check method

$$x^2 \underbrace{+4}_{\text{difference}} x \underbrace{-12}_{\text{product}} = (x + 6)(x - 2)$$

Example: Factor the following x^2 $\underbrace{-3}_{\text{difference}} x \underbrace{-10}_{\text{product}}$

1st step: find all pairs of factors of **c = 10**

Pairs of 10	Difference = 11
(1•10)	10 - 1 = 9
(2•5)	5 - 2 = 3

2nd step: Factor using guess and check method

$$x^2 \underbrace{-3}_{\text{difference}} x \underbrace{-10}_{\text{product}} = (x + 2)(x - 5)$$

Factor each trinomial

1. $x^2 + 2x - 8 =$ _____

2. $x^2 - 8x - 20 =$ _____

3. $x^2 + 2x - 15 =$ _____

4. $x^2 - 5x - 14 =$ _____

5. $x^2 + 4x - 21 =$ _____

6. $x^2 - 9x - 22 =$ _____

7. $x^2 + 19x - 42 =$ _____

8. $x^2 - 3x - 40 =$ _____

9. $x^2 + 2x - 24 =$ _____

10. $x^2 - 7x - 18 =$ _____

11. $x^2 + 5x - 36 =$ _____

12. $x^2 - 4x - 45 =$ _____

13. $x^2 + 5x - 50 =$ _____

14. $x^2 - 6x - 27 =$ _____

15. $x^2 + x - 30 =$ _____

16. $x^2 - x - 90 =$ _____