

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

Name: _____

Grade: **08** _____

Factors Trinomial $x^2 + bx + c$ (c is positive)

Example: Factor the following $x^2 + 7x + 12$

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

Pairs of 12	Sum = 7
(1 • 12)	1 + 12 = 13
(2 • 6)	2 + 6 = 8
(3 • 4)	3 + 4 = 7

2nd step: Factor using guess and check method

$$x^2 + 7x + 12 = (x + 3)(x + 4)$$

Example: Factor the following $x^2 - 11x + 10$

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

Pairs of 10	Sum = 11
(1 • 10)	1 + 10 = 11
(2 • 5)	2 + 5 = 7

2nd step: Factor using guess and check method

$$x^2 - 11x + 10 = (x - 1)(x - 10)$$

Factor each trinomial

1. $x^2 + 6x + 8 =$ _____

2. $x^2 - 12x + 20 =$ _____

3. $x^2 - 6x + 8 =$ _____

4. $x^2 + 9x + 20 =$ _____

5. $x^2 - 8x + 15 =$ _____

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

7. $x^2 - 7x + 12 =$ _____

8. $x^2 + 13x + 42 =$ _____

9. $x^2 + 10x + 24 =$ _____ 10. $x^2 - 9x + 14 =$ _____

11. $x^2 + 14x + 24 =$ _____ 12. $x^2 - 10x + 21 =$ _____

13. $x^2 - 15x + 50 =$ _____ 14. $x^2 + 25x + 100 =$ _____

15. $x^2 + 11x + 30 =$ _____ 16. $x^2 - 19x + 90 =$ _____