

Name: _____ Date: _____

Factoring Trinomials: $ax^2 + bx + c$ OR $ax^2 - bx + c$ **UNIT QUESTION:** In what ways can algebraic methods be used in problems solving?**Sign Rule:** When the last term is **POSITIVE**...- The signs inside the parentheses will be the **SAME** as the **middle number's sign**.**Check to see...**What multiplies to give you the last number **AND** adds to give you the middle number?**Factor each trinomial:**

1. $x^2 + 7x + 6$

2. $x^2 + 9x + 14$

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

4. $x^2 - 10x + 16$

5. $2x^2 - 16x + 24$

6. $3x^2 + 36x + 60$

7. $4x^2 + 24x + 32$

8. $x^2 + 15x + 14$

9. $x^2 + 5x + 4$

10. $x^2 + 9x + 20$

11. $x^2 - 12x + 20$

Factoring Trinomials: $ax^2 + bx - c$ OR $ax^2 - bx - c$ **Sign Rule:** When the last term is **NEGATIVE**...

- The parentheses will have **DIFFERENT** signs.
- The larger factor will have the **SAME** sign as the number.

Check to see...

- What multiplies to give you the last number **AND** adds to give you the middle number?

Factor each polynomial completely:

12. $x^2 + 2x - 48$

13. $x^2 + 8x - 20$

14. $x^2 - 4x - 21$

15. $x^2 - 9x - 36$

16. $x^2 + 2x - 8$

17. $x^2 - 5x - 14$

18. $x^2 - 5x - 24$

19. $x^2 + 5x - 14$

20. $x^2 + x - 20$

21. $x^2 - 5x - 66$
