

- ⊙ **Factoring Trinomials:** Writing the polynomial as a product of 2 binomials.
- Check for GCF 1st. Divide out the GCF of each term if one exists.
 - When factoring $ax^2 + bx + c$, first find factors of a and c .
 - Check the products of the inner and outer terms to see if the sum is b .
- ⊙ **Sign Rule:** When the last term is **POSITIVE**, the signs inside the parentheses will be the **SAME** as the middle term.
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Factor each trinomial completely.

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

Check:

2. $2x^2 - 5x + 3$

Check:

3. $5x^2 + 11x + 2$

Check:

4. $6x^2 - 11x + 3$

Check:

5. $3x^2 - 10x + 3$

Check:

6. $2x^2 - 7x + 5$

Check:

7. $3x^2 - 8x + 4$

Check:

8. $2x^2 - 11x + 9$

Check:

9. $14x^2 - 32x + 18$

Check:

10. $2x^2 - 17x + 35$

Check:

11. $6x^2 - 21x + 15$

Check:

12. $4x^2 - 15x + 9$

Check:

13. $3x^2 + 17x + 20$

Check:

14. $7x^2 - 45x + 18$

Check:

15. $4x^2 - 22x + 10$

Check:

Factor each trinomial completely.

1. $x^2 + 10x + 25$

2. $x^2 - 11x + 24$

3. $5x^2 - 16x + 3$

4. $2x^2 + 16x + 32$

5. $2x^2 - 7x + 5$

6. $5x^2 + 7x + 2$

7. $9x^2 - 6x + 1$

8. $5x^2 - 21x + 4$

9. $4x^2 + 20x + 25$

10. $3x^2 - 10x + 7$

11. $3x^2 + 19x + 6$

12. $4x^2 + 22x + 30$

13. The area of a rectangle is represented by the expression $6x^2 + 17x + 12$. The length is given as $(2x + 3)$. What is an expression for the width?

14. The area of a rectangle is represented by the expression $5x^2 + 12x + 7$. The length is given as $(x + 1)$. What is an expression for the width?
