

NAME _____

Module 12 Simplifying Algebraic Expressions by Factoring Polynomials
Lesson 5 Factoring $ax^2 + bx + c$



**additional
practice**

Factor.

1. $3x^2 + 10x + 7$

$(3x + 7)(x + 1)$

3. $5x^2 + 24x + 7$

Cannot be factored; prime

5. $7x^2 - 4x - 11$

$(7x - 11)(x + 1)$

7. $17x^2 - 4x - 13$

$(17x + 13)(x - 1)$

9. $5x^2 + 8x - 13$

$(5x + 13)(x - 1)$

11. $13x^2 + 64x - 5$

$(13x - 1)(x + 5)$

13. $11x^2 - 18x + 7$

$(11x - 7)(x - 1)$

15. $4x^2 + 7x - 11$

$(4x + 11)(x - 1)$

17. $12x^2 - x - 20$

$(4x + 5)(3x - 4)$

19. $5x^2 + 7x - 1$

Cannot be factored; prime

2. $7x^2 + 15x + 8$

$(7x + 8)(x + 1)$

4. $3x^2 + 40x + 13$

$(3x + 1)(x + 13)$

6. $2x^2 - 5x - 3$

$(2x + 1)(x - 3)$

8. $31x^2 - 61x - 2$

$(31x + 1)(x - 2)$

10. $5x^2 + 94x - 19$

$(5x - 1)(x + 19)$

12. $7x^2 - 22x + 3$

$(7x - 1)(x - 3)$

14. $4x^2 + 8x + 3$

$(2x + 1)(2x + 3)$

16. $36x^2 + 60x + 25$

$(6x + 5)^2$

18. $2x^2 - 5x - 7$

$(x + 1)(2x - 7)$

20. $3x^2 + x - 4$

$(x - 1)(3x + 4)$

21. $3x^2 - 14x + 16$

$(x - 2)(3x - 8)$

23. $14x^2 - 11x - 15$

$(7x + 5)(2x - 3)$

22. $48x^2 + 14x - 49$

$(6x + 7)(8x - 7)$

24. $13x^2 - 36x - 9$

$(13x + 3)(x - 3)$
