

Factoring Quadratic Expressions: $x^2 + bx + c$ (ALG.FAC.03)

Factor each expression completely.

1. $a^2 + 7a + 12$

2. $b^2 + 9b + 8$

3. $c^2 - c - 30$

4. $d^2 + 2d - 15$

5. $f^2 - 10f + 24$

6. $g^2 - 5g + 4$

7. $h^2 + h - 6$

8. $j^2 + 10j + 25$

9. $k^2 - 14k + 49$

10. $m^2 - 7m - 18$

11. $n^2 - 9n + 18$

12. $3p^2 + 9p - 84$

13. $-5q^3 - 30q^2 + 135q$

14. $r^4 - 2r^3 + r^2$

15. $-2t^3 + 12t^2 - 18t$

16. $2u^3 - 26u^2 - 60u$

17. $5x^6 - 5x^5 - 10x^4$

18. $-y^3 + 13y^2 - 30y$

19. $x(x^2 + 3x + 2) + 4(x^2 + 3x + 2)$

20. $3x(x^2 - 6x + 5) - 9(x^2 - 6x + 5)$

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

22. $3x^3 + 15x^2 + 18x - 2x^2 - 10x - 12$

23. $x^2(x^2 - 7x + 12) + 7x(x^2 - 7x + 12) + 12(x^2 - 7x + 12)$

24. $5x^2(x^2 + 6x + 8) - 10x(x^2 + 6x + 8) - 120(x^2 + 6x + 8)$