
(A)Factoring Sum and Difference of two cubes

Factor completely.

1. $x^3 + 27$

2. $x^3 - 64$

3. $x^3 + 125$

4. $x^3 - 1$

5. $8x^3 - 27$

6. $64x^3 + 1$

7. $125x^3 - 8y^3$

8. $64x^3 + 27y^3$

9. $24x^4 - 81x$

10. $16x^4y - 54xy^4$

(B)General Factoring Strategy

Factor completely.

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

12. $5y^2 + 17y + 14$

13. $6y^2 + 5y - 21$

14. $15y^2 + y - 2$

15. $2t^3 - 34t^2 + 60t$

16. $5x^3 - 10x^2 - 15x$

17. $b^2x^5 - 5b^2x^4 - 6b^2x^3$

18. $2c^5x^6 + 4c^5x^5 - 30c^5x^4$

19. $12t^3 - 10t^2 - 12t$

20. $6x^5y + 25x^4y^2 + 4x^3y^3$

21. $12x^4y^3 + 11x^3y^4 + 2x^2y^5$

22. $12y^3 + 12y^2 + 3y$

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

24. $y^3 - 5y^2 + 3y - 15$

25. $4y^3 + 8y^2 + y + 2$

26. $4a^4 - 12a^2 - 3a^2 + 9$

27. $3x - 2y + 15xz - 10yz$

28. $15x^2 - 6y - 9x + 10xy$

29. $35y^2 + 28x - 20y - 49xy$

30. $18x^2 - 60xy + 50y^2$

31. $25x^2 - 81y^2$

32. $121x^2 - 4y^2$

33. $-4x^4 + 9x^2$

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

35. $\frac{16x^2}{49} - \frac{25y^2}{81}$

36. $y^4 - 81$

37. $16x^4 - 1$

38. $8x^3 - 72x$

39. $5x^3y - 125xy^3$

40. $3x^5y^2 - 27x^3y^4$