

Given a polynomial and one of its factors, find the remaining factors of the polynomial. Some factors may not be binomials.

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

18. $x^3 + 7x^2 + 7x - 15; x - 1$

19. $x^3 - 9x^2 + 27x - 27; x - 3$

20. $x^3 - x^2 - 8x + 12; x + 3$

21. $x^3 + 5x^2 - 2x - 24; x - 2$

22. $x^3 - x^2 - 14x + 24; x + 4$

23. $3x^3 - 4x^2 - 17x + 6; x + 2$

24. $4x^3 - 12x^2 - x + 3; x - 3$

25. $18x^3 + 9x^2 - 2x - 1; 2x + 1$

26. $6x^3 + 5x^2 - 3x - 2; 3x - 2$

27. $x^5 + x^4 - 5x^3 - 5x^2 + 4x + 4; x + 1$

28. $x^5 - 2x^4 + 4x^3 - 8x^2 - 5x + 10; x - 2$

Given a polynomial and one of its factors, find the remaining factors of the polynomial. Some factors may not be binomials.

1. $x^3 + x^2 - 10x + 8; x - 2$

2. $x^3 - 4x^2 - 11x + 30; x + 3$

3. $x^3 + 15x^2 + 71x + 105; x + 7$

4. $x^3 - 7x^2 - 26x + 72; x + 4$

5. $2x^3 - x^2 - 7x + 6; x - 1$

6. $3x^3 - x^2 - 62x - 40; x + 4$

7. $12x^3 - 71x^2 + 57x - 10; x - 5$

8. $14x^3 + x^2 - 24x + 9; x - 1$

9. $x^3 + x + 10; x + 2$

10. $2x^3 - 11x^2 + 19x - 28; x - 4$

11. $3x^3 - 13x^2 - 34x + 24; x - 6$

12. $x^4 + x^3 - 11x^2 - 9x + 18; x - 1$