

MP PERSEVERANCE State the degree and leading coefficient of each polynomial in one variable. If it is not a polynomial in one variable, explain why.

15. $8x^5 - 12x^6 + 14x^3 - 9$

16. $-12 - 8x^2 + 5x - 21x^7$

17. $15x - 4x^3 + 3x^2 - 5x^4$

18. $13b^3 - 9b + 3b^5 - 18$

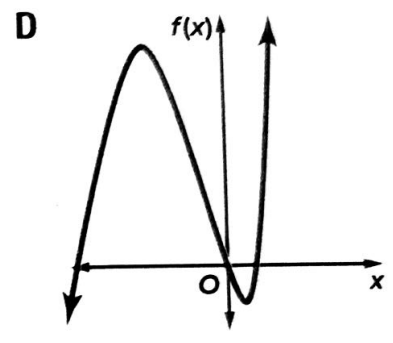
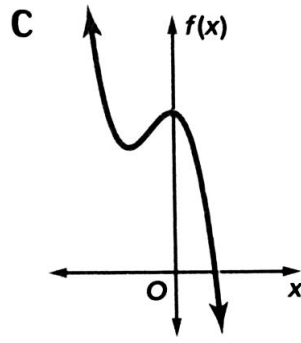
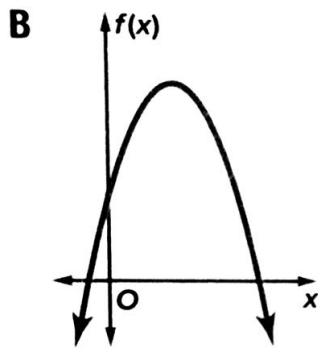
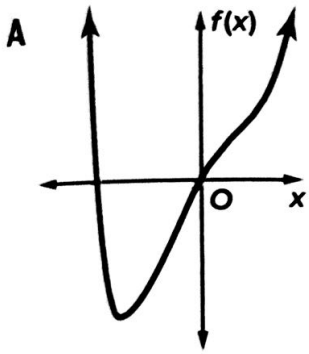
19. $(d + 5)(3d - 4)$

20. $(5 - 2y)(4 + 3y)$

21. $6x^5 - 5x^4 + 2x^9 - 3x^2$

22. $7x^4 + 3x^7 - 2x^8 + 7$

Use the degree and end behavior to match each polynomial to its graph.



47. $f(x) = x^3 + 3x^2 - 4x$

48. $f(x) = -2x^2 + 8x + 5$

49. $f(x) = x^4 - 3x^2 + 6x$

50. $f(x) = -4x^3 - 4x^2 + 8$

Use a graphing calculator to estimate the x -coordinates at which the maxima and minima of each function occur. Round to the nearest hundredth.

19. $f(x) = x^3 + 3x^2 - 6x - 6$

20. $f(x) = -2x^3 + 4x^2 - 5x + 8$

21. $f(x) = -2x^4 + 5x^3 - 4x^2 + 3x - 7$

22. $f(x) = x^5 - 4x^3 + 3x^2 - 8x - 6$