

FINDING REAL ZEROS Find all the real zeros of the function.

33. $f(x) = x^3 - 8x^2 - 23x + 30$

34. $f(x) = x^3 + 2x^2 - 11x - 12$

35. $f(x) = x^3 - 7x^2 + 2x + 40$

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

37. $f(x) = x^3 + 72 - 5x^2 - 18x$

38. $f(x) = x^3 + 9x^2 - 4x - 36$

39. $f(x) = x^4 - 5x^3 + 7x^2 + 3x - 10$

40. $f(x) = x^4 + x^3 + x^2 - 9x - 10$

41. $f(x) = x^4 + x^3 - 11x^2 - 9x + 18$

42. $f(x) = x^4 - 3x^3 + 6x^2 - 2x - 12$

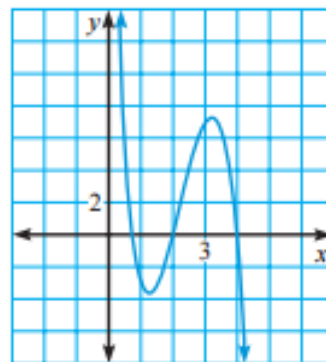
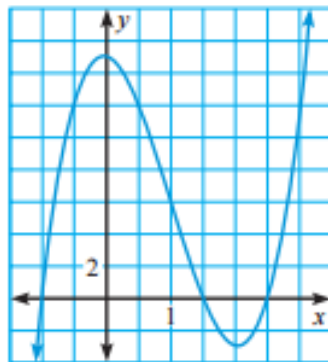
43. $f(x) = x^5 + x^4 - 9x^3 - 5x^2 - 36$

44. $f(x) = x^5 - x^4 - 7x^3 + 11x^2 - 8x + 12$

ELIMINATING POSSIBLE ZEROS Use the graph to shorten the list of possible rational zeros. Then find all the real zeros of the function.

45. $f(x) = 4x^3 - 12x^2 - x + 15$

46. $f(x) = -3x^3 + 20x^2 - 36x + 16$

**FINDING REAL ZEROS** Find all the real zeros of the function.

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

48. $f(x) = 2x^3 - 5x^2 - 14x + 8$

49. $f(x) = 2x^3 - 5x^2 - x + 6$

50. $f(x) = 2x^3 + x^2 - 50x - 25$

51. $f(x) = 2x^3 - x^2 - 32x + 16$

52. $f(x) = 3x^3 + 12x^2 + 3x - 18$

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

54. $f(x) = 3x^4 - 8x^3 - 5x^2 + 16x - 5$

Find the real zeros of the function. Then match each function with its graph.

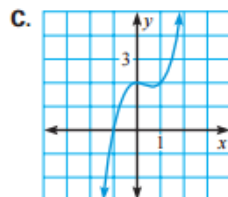
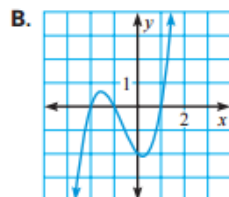
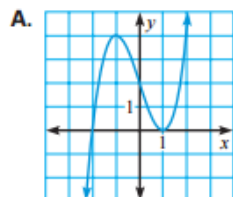
67. $f(x) = x^3 + 2x^2 - x - 2$

68. $g(x) = x^3 - 3x + 2$

69. $h(x) = x^3 - x^2 + 2$

$+ 11x^2 + x - 2$

$243x - 81$

**Find all the real zeros of the function. (Lesson 6.6)**

15. $f(x) = x^3 - 4x^2 - 7x + 28$

16. $f(x) = x^3 - 6x^2 + 21x - 26$

17. $f(x) = 2x^3 + 15x^2 + 22x - 15$

18. $f(x) = 2x^3 + 7x^2 - 28x + 12$