

39. factor

40. not a factor

41. not a factor

42. not a factor

43. factor

44. factor

$$45. \begin{array}{r|rrrr} -4 & 1 & -1 & -20 & 0 \\ & & -4 & 20 & 0 \\ \hline & 1 & -5 & 0 & 0 \end{array}$$

$$g(x) = x(x + 4)(x - 5)$$

$$46. \begin{array}{r|rrrr} 5 & 1 & -5 & -9 & 45 \\ & & 5 & 0 & -45 \\ \hline & 1 & 0 & -9 & 0 \end{array}$$

$$t(x) = (x - 5)(x - 3)(x + 3)$$

$$47. \begin{array}{r|rrrrr} 6 & 1 & -6 & 0 & -8 & 48 \\ & & 6 & 0 & 0 & -48 \\ \hline & 1 & 0 & 0 & -8 & 0 \end{array}$$

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

$$48. \begin{array}{r|rrrrr} -4 & 1 & 4 & 0 & -64 & -256 \\ & & -4 & 0 & 0 & 256 \\ \hline & 1 & 0 & 0 & -64 & 0 \end{array}$$

$$s(x) = (x + 4)(x - 4)(x^2 + 4x + 16)$$

$$49. \begin{array}{r|rrrr} -7 & 1 & 0 & -37 & 84 \\ & & -7 & 49 & -84 \\ \hline & 1 & -7 & 12 & 0 \end{array}$$

$$r(x) = (x + 7)(x - 3)(x - 4)$$

$$50. \begin{array}{r|rrrr} -2 & 1 & -1 & -24 & -36 \\ & & -2 & 6 & 36 \\ \hline & 1 & -3 & -18 & 0 \end{array}$$

$$h(x) = (x + 2)(x - 6)(x + 3)$$

51. D; The x -intercepts of the graph are 2, 3, and -1 .52. C; The x -intercepts of the graph are 0, -2 , -1 , and 2.53. A; The x -intercepts of the graph are -2 , -3 , and 1.54. B; The x -intercepts of the graph are 0, 2, 1, and -2 .