

CL 9-177. Decide if each of the following equations is a polynomial. If it is, state the degree. If it is not, explain how you know.

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

b. $y = 0.25x^7 - 5x$

c. $y = 3^x - x^2$

d. $f(x) = x^2 - \sqrt{x} + 2$

e. $Q(x) = 3(x-4)^2(x+2)$

f. $y = x^2 - 3x + 5 - \frac{2}{x-2}$

CL 9-178. Where do the graphs of each of the following functions cross the x -axis?

a. $f(x) = (x-2)^2 - 3$

b. $f(x) = (x-19)^2(x+14)$

CL 9-179. Write a polynomial equation for a graph that has three x -intercepts at $(-3, 0)$, $(2, 0)$, and $(5, 0)$, and passes through the point $(1, 56)$.

CL 9-183. Simplify each expression

a. $(3+4i) + (7-2i)$

b. $(3+5i)^2$

c. $(7+i)(7-i)$

d. $(3i)(2i)^2$

e. i^3

f. i^{32}

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