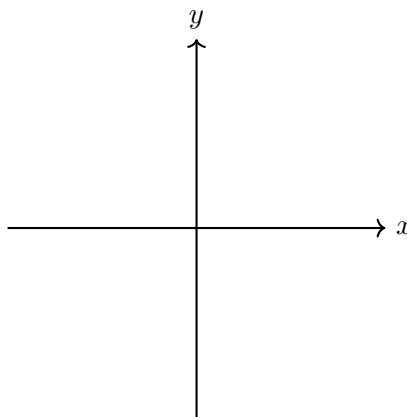# ALGEBRA 2
PROBLEM SET 18

DUE DATE: NOVEMBER 16, 2023

Question 1. For each of the following, find the x-intercepts, the multiplicity of each x-intercept, and sketch a graph of each of the polynomials below:
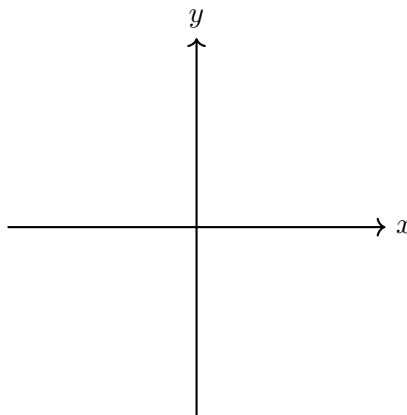
$$f(x) = (x - 10)^2 (x + 5)^{2023}$$

x-intercepts:
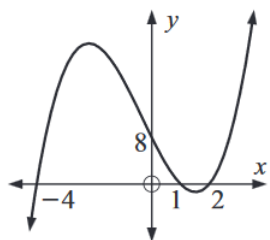
multiplicity:
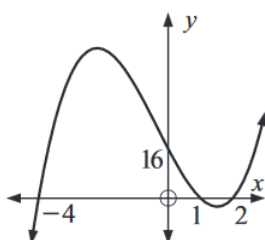

$$g(x) = -5x(x + 4)^3 (x - 1)^2$$

x-intercepts:

multiplicity:

Question 2. Match the given graphs to the corresponding polynomial equations:
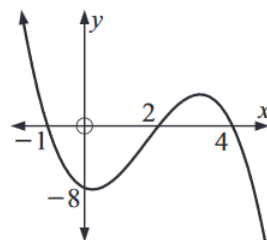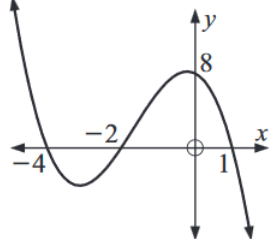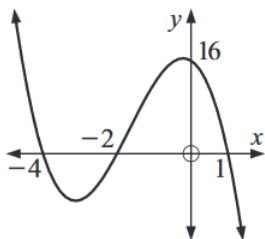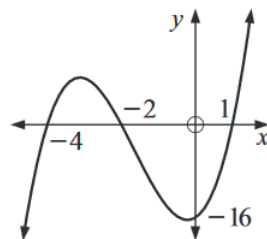
A

B

C

D

E

F

$$f(x) = 2(x-1)(x+2)(x+4)$$

$$g(x) = 2(x-1)(x-2)(x+4)$$

$$h(x) = -2(x-1)(x+2)(x+4)$$

$$p(x) = (x-1)(x-2)(x+4)$$

$$q(x) = -(x-1)(x+2)(x+4)$$

$$p(x) = -(x+1)(x-2)(x-4)$$