

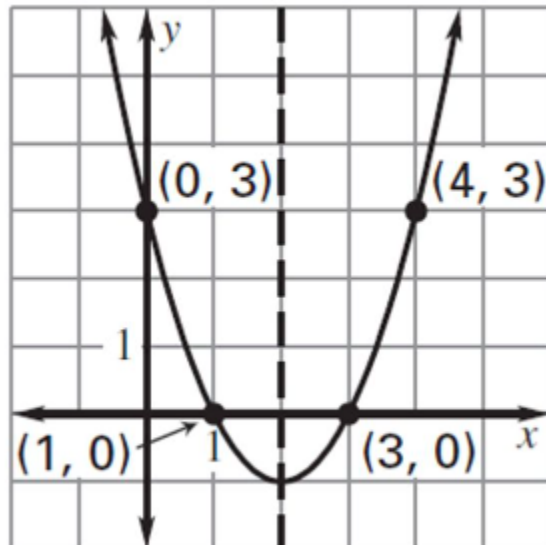
Name:

Class:

Algebra, Unit 7: Practice Summative Assessment No. 2

Question 1

Select the **three** equations that could define function $f(x)$ graphed below.



a. $f(x) = (x + 1)(x + 3)$

b. $f(x) = (x - 1)(x - 3)$

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

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

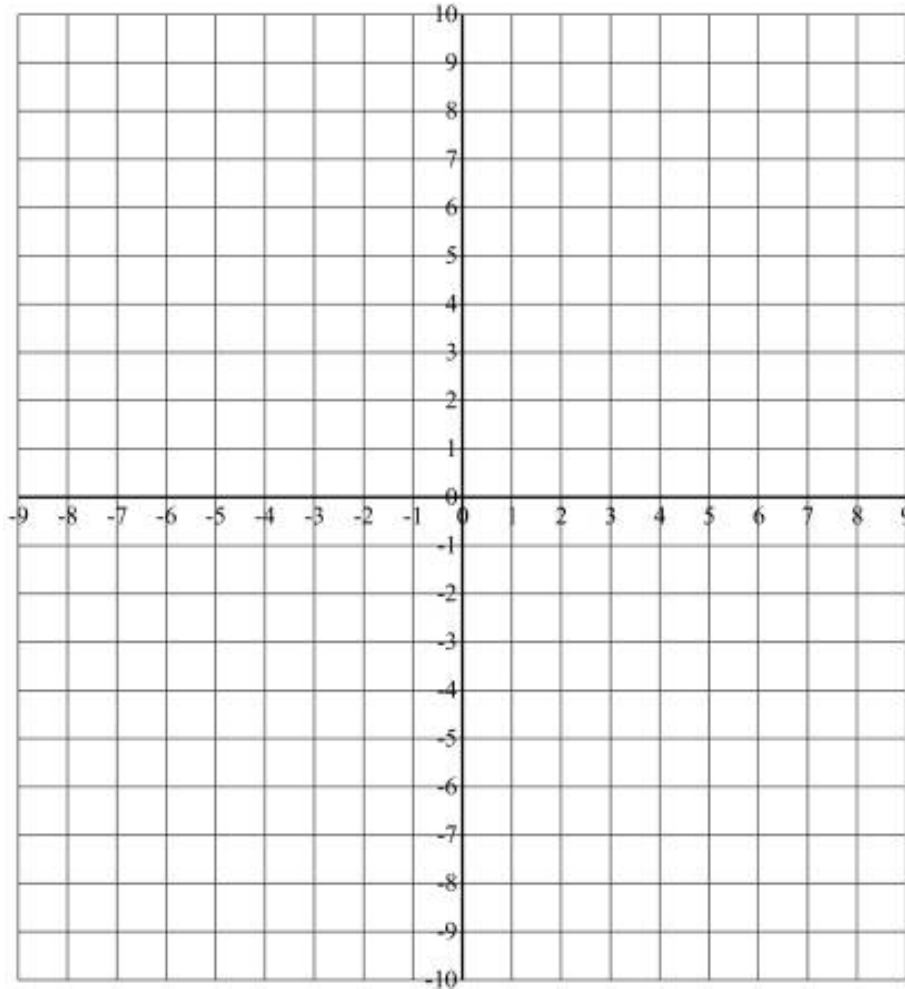
e. $f(x) = (x + 2)^2 - 1$

f. $f(x) = (x - 2)^2 - 1$

Question 2

A quadratic function is defined by $p(x) = -(x + 2)(x + 4)$.

Graph the function on the coordinate plane and label the coordinates of:



x -intercepts (,)

(,)

y -intercept (,)

vertex (,)

Question 3

Use the equation $y = x^2 - 2x - 15$ for each part:

a. Write the equation in factored form.

b. What is the vertex of the equation?

Question 5

Complete the square to write the function in vertex form. Show your work.

$$-2x^2 - 16x + 5$$

Question 6

An orange is shot up into the air with a catapult. The function

$h(t) = -16t^2 + 80t + 110$ models the orange's height, in feet, t seconds after it was launched.

- a. What is the height of the orange when it is launched?

- b. What **two** expressions would show the roots of the function?

