/17

Algebra 2- Chapter 5
Learning Target Quiz #2

Name Key Per ____

LT #2: Linear Factors and Zeros

1. Write the equation of a polynomial function in standard form with zeros of 2, -1, and 0. (3 Points)

$y=(x-2)(x+1)(x-0)$

$y=(x^2+x-2x-2)(x)$

$y=(x^2-x-2)(x)$

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

2. State the zero(s) and their multiplicity for f(x) below: (4 points)

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

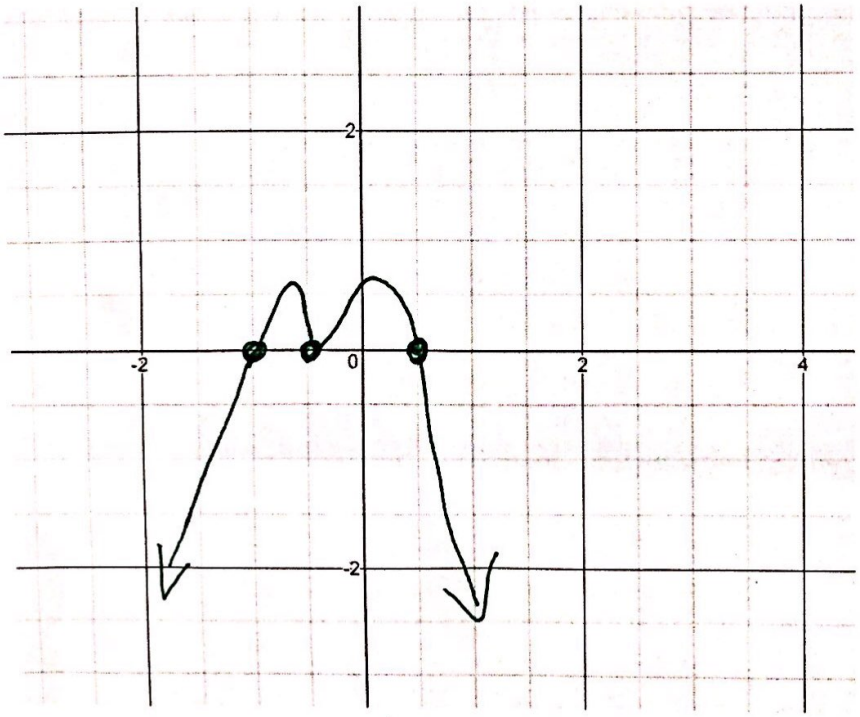
3. $g(x) = -2(x-1)^3(x+2)(x+1)^2$

a. Determine the degree. (1 Point) $3+1+2$

b. Determine the end behavior. (2 Points)

c. State the zeroes and multiplicity: (3 points)

d. Sketch the graph of the function g(x): (4 Points)



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

2.
Zero: 0 Mult: 1
Zero: 3 Mult: 3
Zero: -4 Mult: 1
Zero: -1 Mult: 2

3.
a. Degree: 6
b. End Behavior:
On the left, the graph falls
On the right, the graph falls
c. x = 1, m = 3 (cross)
x = -2, m = 1 (cross)
x = -1, m = 2 (touch)
d. See graph at left