Math 120B   **Quiz 3**   **Name** ————————————

Directions: *Please show all of your work clearly. Full credit will only be given when work is clearly presented.*

(10 points)
1. Fully factor the following polynomial, find all of the roots and state the intervals where the graph is positive and negative.

$$y = x^3 + 2x^2 - 6x - 7$$

(5points)
2. If the product of two successive integers is 272, what are these integers?

(5 points)

3. If $f(x) = 3(x-2)^2$ and $g(x) = -3$, accurately graph the function $f(x) + g(x)$. State the domain and range of this new function.