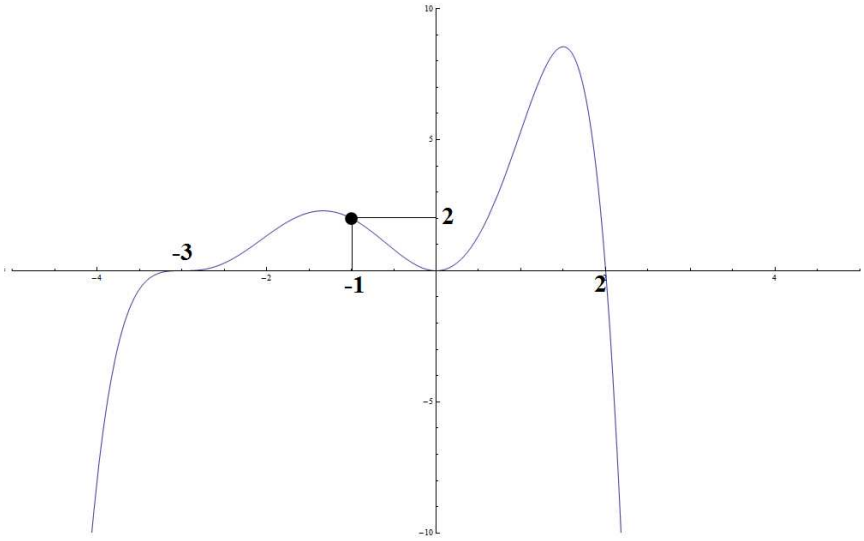
QUIZ 6 - MATH 111 Friday, March 18

YOUR NAME:_____ George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Let $f(x)$ be the function whose graph is shown below.



(a) List the zeros of $y = f(x)$ together with their multiplicities.

(b) Find a formula for $y = f(x)$.

2. [5 points] Let $f(x) = x^5 - x^3 + x - 1$.

   (a) Use the remainder theorem to find $f(2)$.

   (b) Perform the division $f(x) \div (x^2 - 3)$ and write your answer in the appropriate form.