12011, Section 002, Calculus with Precalculus I.
Home Work 6, due Wednesday October 18
Instructor: Prof. Artem Zvavitch
You must show all details of your calculations!

Problem 1. *Sketch a graph of the following functions (make sure to show x-intercepts)*

- $y = x(x-2)(x-3)$
- $y = x^5 - x$
- $y = (x-1)(2-x)(3-x)$
- $y = (x^2-1)(x^2+6x+9)$

Problem 2. *Find the quotient and remainder*

- $\frac{x^3-x^2+3x+5}{x^2-1}$
- $\frac{x^5-x^3-x^2+1}{1-x}$
- $\frac{x^{10}-1}{1-x}$

Problem 3. *Find reminder*

- $\frac{x^3-x^2+3x+5}{x-1}$
- $\frac{x^5-x^3-x^2+1}{3-x}$
- $\frac{x^{10}-1}{x}$