REVIEW C — Graphing Calculator Practice

STUDENT REVIEW SHEET

Name: _____ **Class:** _____ **Date:** _____

Today I am learning to interpret and solve polynomial problems across Topics 1.1–1.6.

So I can connect equations, graphs, tables, rates of change, and real-world interpretation.

I will know I have learned it when I can justify my answers using mathematical evidence.

KEY IDEAS: AROC = [f(b) − f(a)] / (b − a) • even f(−x)=f(x) • odd f(−x)=−f(x) • multiplicity controls crossing/touching.

1. Use a graphing calculator to analyze $f(x) = -6x^3/5 + 11x^2/5 + 5x + 3$ on [−3, 3]. (a) Sketch the graph in the box. (b) Give all local minima and maxima (x, y) rounded to 3 decimals. (c) State intervals of increase and decrease. (d) Find all real zeros within the domain. (e) Find absolute minimum and maximum on the given closed interval.

2. Use a graphing calculator to analyze $g(x) = 3x^4/5 - 2x^2 + x - 3$ on [−3, 3]. (a) Sketch the graph in the box. (b) Give all local minima and maxima (x, y) rounded to 3 decimals. (c) State intervals of increase and decrease. (d) Find all real zeros within the domain. (e) Find absolute minimum and maximum on the given closed interval.

3. Use a graphing calculator to analyze $h(x) = -x^5/5 + x^4 - 2x^2 - x - 3$ on [0, 6]. (a) Sketch the graph in the box. (b) Give all local minima and maxima (x, y) rounded to 3 decimals. (c) State intervals of increase and decrease. (d) Find all real zeros within the domain. (e) Find absolute minimum and maximum on the given closed interval.

4. EXIT TICKET: (a) What TI-84 command finds a zero? (b) Why must you check endpoints for absolute extrema? (c) Describe the difference between local and absolute maximum.

WHAT I LEARNED TODAY: A zero with even multiplicity _____; a positive average rate of change means _____; an odd function satisfies _____.

VIDEOS FOR THIS REVIEW

TI-84 graphing, zeros, minima and maxima — University of Houston — https://online.math.uh.edu/GraphCalc/index.html