

MTH 30 LECTURE NOTES (Ojakian)

Topic 3: Graph Behavior

OUTLINE

(References: 1.3)

1. Increasing and Decreasing
 2. Max and Min
 3. Note: Skipping average value
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1. Some funny words

- (a) “input” = “at” = “where” = “when”
- (b) “output” = “value”
- (c) Problem: Draw a graph and use this terminology

2. Going up and going down

- (a) increasing
- (b) decreasing
- (c) Do 1.3: 19, 21

3. Absolute Extrema

- (a) Absolute max
- (b) Absolute min
- (c) Do: Basic example
- (d) Problem: Consider graphs in 1.3 - 19, 21
- (e) Problem:
Find a graph with 1) no absolute extrema, 2) just an absolute max, 3) just an absolute min

4. Local Extrema

- (a) Discuss connection to ever smaller open intervals.
- (b) Local max
- (c) Local min
- (d) Do: Local extrema for 1.3: 19
- (e) Problem: Find a graph with no local extrema