

Analyzing Graphs of Polynomial Functions

Example 1:

x-int: $(-4, 0)$ $(-3, 0)$ $(3, 0)$

y-int: $(0, 72)$

local maximum: $(0.9, 80.3)$
"relative"

local minimum: $(-3.5, -3.2)$

absolute maximum: none (∞)

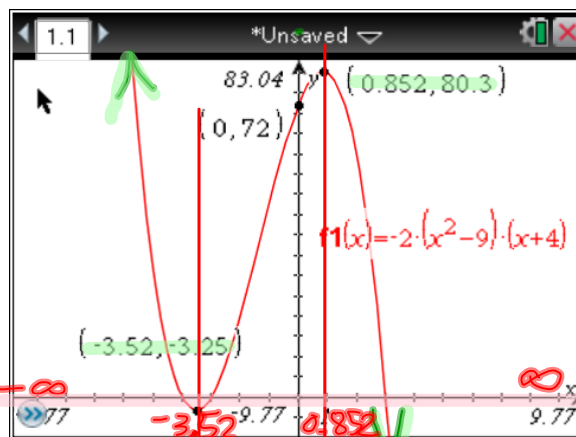
absolute minimum: none $(-\infty)$

interval of increasing: $(-3.52, 0.852)$
x-values!

interval of decreasing: $(-\infty, -3.52) \cup (0.852, \infty)$

Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$



x-values
of turning
points

Example 2:

x-int: $(-3.51, 0)$ $(0.222, 0)$ $(1.29, 0)$

y-int: $(0, 1)$

local maximum: $(-2.12, 11.1)$

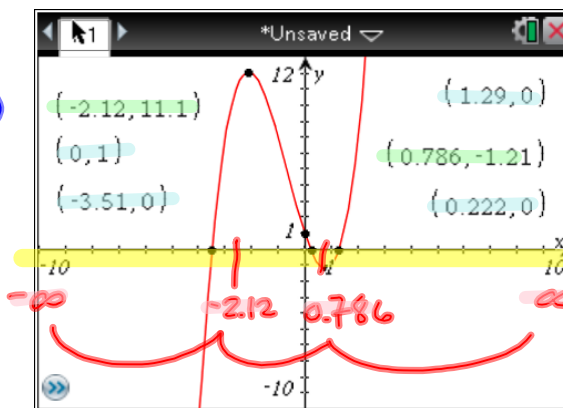
local minimum: $(0.786, -1.21)$

absolute maximum: none (∞)

absolute minimum: none $(-\infty)$

interval of increasing: $(-\infty, -2.12) \cup (0.786, \infty)$

interval of decreasing: $(-2.12, 0.786)$



Example 3

List everything you know about the given function.

