

Formative Assessment #23 – Intervals of Increase and Decrease

C5.5: I can determine the intervals on which a function is increasing and decreasing.

C5.6: I can determine the local extrema (maximum and minimum values) of a function.

Determine the intervals of increase and decrease and the relative maximum and minimum values for the function given below.

$$f(x) = x^4 - 4x^3 - 8x^2 - 1.$$

Justify your answer with a neatly labeled number line and a chart of test values.