## Exercise 35

For the following exercises, use a graphing utility to estimate the local extrema of each function and to estimate the intervals on which the function is increasing and decreasing.

$$
f(x)=x^{4}-4 x^{3}+5
$$

## Solution

Below is a graph of $f(x)$ versus $x$.


The function is decreasing on $(-\infty, 0) \cup(0,3)$, and the function is increasing on $(3, \infty)$.

