

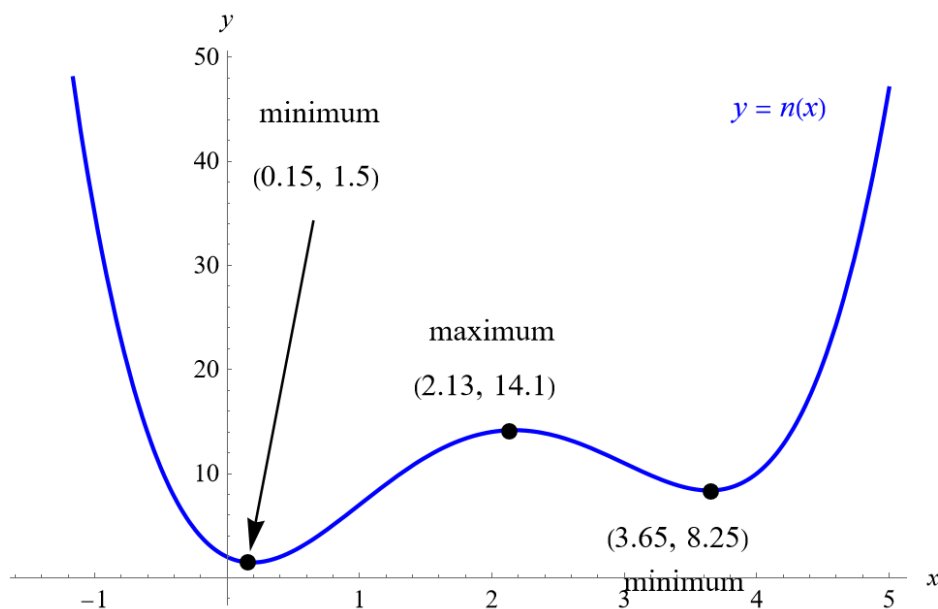
## Exercise 40

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.

$$n(x) = x^4 - 8x^3 + 18x^2 - 6x + 2$$

### Solution

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



The function is decreasing on  $(-\infty, 0.15) \cup (2.13, 3.65)$ , and the function is increasing on  $(0.15, 2.13) \cup (3.65, \infty)$ .