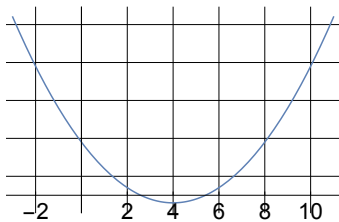1. Find all critical values of $f(x) = x^3 - 9x^2 + 24x + 5$, and then use the First Derivative Test to classify each as a local max, local min, or neither.

2. The graph of $y = h(x)$ is shown below. If $f(x) = h(x^2)$, find the intervals where $f(x)$ is increasing and decreasing.

Graph of $y = h(x)$

3. Create a function $g(x)$ that has critical points at $x = 0$ and $x = 2$ where $x = 2$ is a local minimum but $x = 0$ is neither a local max nor a local min.
   Hint: Look at the graph of $y = x^3 - 2x^2$