

Intervals of Increase/Decrease and Concavity

1. Find the intervals of increase and decrease for the function $f(x) = x^{2/3}(x - 5)$. Then use the first derivative test to determine where the relative extrema are.
2. Find the intervals of concavity for the function $f(x) = \frac{x^4}{3-12x^2}$ and then use the second derivative test to determine where the relative maxima are.