

**Q1.** Find the Absolute Maxima and Absolute Minima of  $f(x) = \frac{x^2}{x-2}$  on the interval  $[-1, 2)$ .

(b) Find all critical points of  $f(x)$ .

(c) Find the second derivative of  $f(x)$ .

(d) Only use the 2<sup>nd</sup> Derivative to test the critical points of  $f(x)$ .

**Q2.**  $f(x) = \frac{x^4 - x^2 + 1}{x^2 - 1}$

(a) Find all asymptotes of  $f(x)$ .