1. A function $f$ has second derivative $f^{(2)}(x) = (x - 1)(x - 3)$. Find the intervals on which $f$ is concave up and those on which it is concave down.

2. A function $g$ has a critical point at $x = 0$ and its second derivative is $g^{(2)}(x) = \frac{2(3x^2 - 1)}{(x^2 + 1)^2}$. Determine if $x = 0$ is a relative minimum or relative maximum for the function.
3. Find all horizontal and vertical asymptotes of the graph of \( h(x) = \frac{x}{x-1} \).