

Worksheet 6

For each function, (a) Find all asymptotes; (b) Identify the critical points; (c) Identify possible inflection points; (d) Identify where the function is increasing and decreasing; (e) Find the intervals where the function is concave up or concave down; (f) Find the local maxima/minima; (g) Sketch the function (h) Identify all intercepts

1. $y = \frac{x^2 - 4}{x^2 - 2x}$

2. $y = \frac{x^2}{x^2 + 9}$

3. $y = x^3 + 6x^2 + 9x$

4. $y = \frac{2x + 4}{3x - 1}$