

Curve Sketching

Date _____ Period _____

For each problem, find the: x and y intercepts, x-coordinates of the critical points, open intervals where the function is increasing and decreasing, x-coordinates of the inflection points, open intervals where the function is concave up and concave down, and relative minima and maxima. Using this information, sketch the graph of the function.

1) $y = -\frac{x^3}{3} + x^2$

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

3) $y = \frac{x^2 + 5x - 6}{x^2 - 1}$