

4. Find the first and second derivatives, create the sign table and sketch the graph of the function $f(x) = x^3 + 3x^2 - 45x - 47$, clearly labeling all critical points on the graph.

5. Find the domain, the asymptotes, the first and second derivatives, create the sign table and sketch the graph of $f(x) = \frac{1-x}{x+1}$, clearly labeling all critical points on the graph.