Math 15 Honors problems – chapter 15: Curve Sketching

1	For $f(x) = \frac{x^3}{3-x^2}$, find the x and y intercepts, vertical asymptotes, end-behavior, intervals of increasing and decreasing, max/min points, intervals where curve is concave up and concave down, inflection points. Draw the graph.

2	For $f(x) = x\sqrt{9 - x^2}$; $-3 \leq x \leq 3$ find the x and y intercepts, end-behavior, intervals of increasing and decreasing, max/min points, intervals where curve is concave up and concave down, inflection points. Draw the graph.