SKETCH OF A GRAPH

1. Let $f(x) = x^3 - 6x^2 + 9x + 1$.
   (1) Find the intervals where f is increasing and the intervals where f is decreasing.
   (2) Find the local maximum point and the local minimum point of f.
   (3) Find the intervals where f is concave up and the intervals where f is concave down.
   (4) Find the inflection point of f.
   (5) Sketch f.

2. Let $f(x) = \dfrac{x^2 - 3}{x^3}$.
   (1) Find the asymptote of f.
   (2) Find the x-intercepts and y-intercepts of f.
   (3) Show that f is an odd function.
   (4) Find the intervals where f is increasing and the intervals where f is decreasing.
   (5) Find the local maximum point and the local minimum point of f.
   (6)Find the intervals where f is concave up and the intervals where f is concave down.
   (7) Find the inflection points of f.
   (8) Sketch f.