

You may use the following limits (without deriving them):

$$\frac{d}{dx} \frac{1+2x^2}{1+x^2} = \frac{2x}{(1+x^2)^2},$$

$$\frac{d^2}{dx^2} \frac{1+2x^2}{1+x^2} = \frac{2-6x^2}{(1+x^2)^3}.$$

The figure below shows part of the graph of f , but I want to see all your calculations of the asymptotes, concavity, and intervals of increase and decrease. In your writeup, sketch the graph and indicate the important values (in particular, the inflection points).

