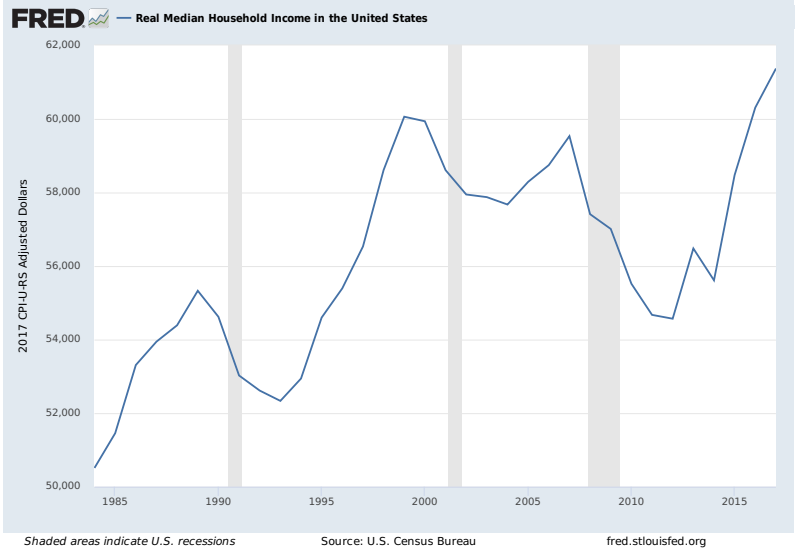
https://fred.stlouisfed.org/series/MEHOINUSA672N



Let $f(x) = x^3 - 2x$ and $g(x) = x + 2$

1. Plot $y = f(x)$
   (a) What are the roots of f? (i.e., Where is $f(x) = 0$?)
   (b) Where is f increasing? decreasing?
   (c) Where does f have local maxima? minima?
   (d) Where is f concave up? concave down?
   (e) Where does the concavity of f change?

2. Let $h(x) = g(\ f(x)\ )$
   (a) Give the formula for $h(x)$
   (b) Plot $y = h(x)$ and $y = f(x)$ on the same set of axes
   (c) How is the graph of $y = h(x)$ related to the graph of $y = f(x)$?

3. Repeat #2 for $h(x) = f(\ g(x)\ )$