

[6] 7. Find the absolute maximum and absolute minimum value of  $f(x) = x^3 - 12x$  on the interval  $[-3, 3]$ .

[6] 8. Is there a function  $f$  from the reals to the reals which is not continuous, but has a continuous square? Justify your answer.

[11] 9. Use the graphing strategy to analyze the function

$$h(x) = \frac{2x-1}{x^2}.$$

State all pertinent information and sketch a graph of  $h$ .

[11] 10. The Lorenz curve for a small country is  $f(x) = x^{2.3}$ . Graph the curve and find the Gini index for this country.