

## Quiz 9

1. (2 points). Find the local maximum and minimum values of  $g(x) = 2x^3 + 3x^2 - 12x + 5$  using the Second Derivative Test.

2. (3 points). Let  $f(x) = 1 + \frac{1}{x-2} - \frac{1}{(x-2)^2}$ . Find (a) vertical and horizontal asymptotes, (b) intervals of increase or decrease, (c) local maxima and minima, (d) intervals of concavity and inflection points, and (e)  $x$ - and  $y$ -intercepts.

If you have time, sketch a graph of  $f$  on the back, taking into account features (a)-(e).