

## ASSIGNMENT 9

MTH101 (2014)

- (1) For each of the following functions find the maximum and minimum values on the indicated intervals.
  - (a)  $f(x) = \frac{x+1}{x^2+1}$  on  $[-1, \frac{1}{2}]$ .
  - (b)  $f(x) = x + \frac{1}{x}$  on  $[\frac{1}{2}, 1]$ .
  - (c)  $f(x) = x^3 - x$  on  $[-2, 2]$ .
- (2) State Rolle's theorem.
- (3) State Mean value theorem.