

Name: _____

Score: _____

Instructions: You must show supporting work to receive full and partial credits. No text book, notes, formula sheets allowed.

1(5pts) Find the limit $\lim_{x \rightarrow 2} \frac{2-x}{x^2-3x+2}$

2(5pts) A function is given below

$$f(x) = \begin{cases} x+1 & \text{if } x < 1 \\ x^2-4 & \text{if } 1 \leq x \leq 2 \\ 3-x & \text{if } x > 2 \end{cases}$$

- (a) Graph the function.
- (b) Find all discontinuities of the function.
- (c) For the largest discontinuity point, find the left and right side limits.