

DIRECTIONS:

- No papers, phones, calculators, or gadgets are permitted to be out during the quiz.
- Show all work, clearly and in order **You will lose points if any of these instructions are not followed.**

Questions	Points	Score
1	1	
2	2	
3	2	
Total	5	

Problem 1: (1 point) Write the equation of the line which passes through the points $(1, 2)$ and $(0, -1)$.

Using the slope-intercept formula:

$$y = 3x - 1.$$

Problem 2: (2 points) Draw a picture of a function which is increasing on $(-\infty, -1) \cup (2, \infty)$, decreasing on $(-1, 2)$, and concave down on $(-\infty, 0)$, and concave up on $(0, \infty)$ passes through the x-axis exactly once, and has a positive y-intercept.

(see class notes)

Problem 3: (2 points) For each of the following, mark the statement as either true (T) or false (F).

(a) (0.5 points) All polynomials are algebraic functions. “_____ T _____.”

(b) (0.5 points) All rational functions are algebraic functions. “_____ T _____.”

(c) (0.5 points) All polynomials are linear functions. “_____ F _____.”

(d) (0.5 points) All algebraic functions are rational functions. “_____ F _____.”