

# Quiz 2

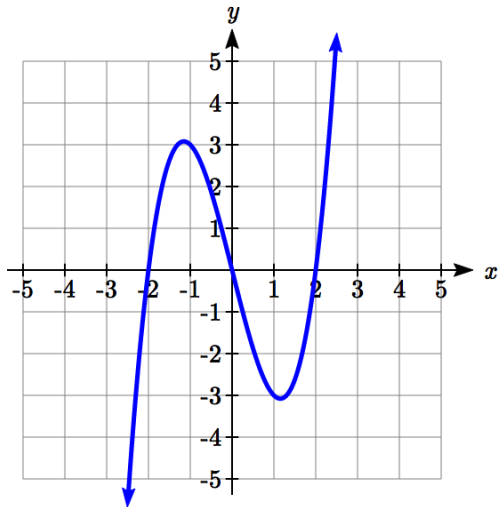
Math 3C: Precalculus  
October 10, 2019

When you finish, please remain seated until class is dismissed

Name: \_\_\_\_\_

PID: \_\_\_\_\_

**Problem 1** (6 points). Consider the graph below and answer the following questions.



- (a) Where is the function concave up? Express your answer in interval or inequality notation.  
*(do not include inflection points in your answer)*

- (b) Where is the function concave down? Express your answer in interval or inequality notation.  
*(do not include inflection points in your answer)*

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**Problem 2** (4 points). Let

$$s(x) = \frac{1}{x+2} + x \quad \text{and}$$

$$r(y) = 2y^2 - 1$$

(a) What is  $s(r(1))$ ? Show your work.

(b) What is the formula for  $(s \circ r)(y)$ ? Show your work.

*Hint: Recall that  $(s \circ r)$  is mathematical shorthand for “the composition of  $s$  with  $r$ ”*