

MATH 1A – QUIZ 9

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Name: _____

Instructions: You have 22 minutes to take this quiz, for a total of 10 points. **Show your work!** May your luck be optimized!

(1) (5 points) Sketch the graph of $f(x) = \frac{\sin(x)}{1+\cos(x)}$

(2) (1 point) Solve the differential equation $x(y') + y = \sec^2(x)$.

Note: You are not allowed to use Math 1B techniques for this!

Hint: Write the left-hand-side in the form (something)', then do something familiar, and finally solve for y

(3) (4 points) What is the area of the largest rectangle that can be inscribed (put in) a circle of radius R ?