

Math 1B: Quiz 12  
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Name: \_\_\_\_\_  
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You must always justify your answers. This means: show your work, show it neatly, and when in doubt, use words (and pictures!) to explain your reasoning. No justification = no points.

1. (10 pts) Find a power series representation (centered at 0) of solution to the following initial value problem:

$$xy'' + y' + y = 0, \quad y(0) = 1, \quad y'(0) = -1$$