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**MAC 2311**  
**Quiz One Sample**

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Please show all of your work in a NEAT and ORGANIZED fashion.

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1. (2 points) Solve for  $x$  and write your answer in interval notation:

$$\left|1 - \frac{x}{3}\right| \geq 2.$$

2. (2 points) Find all  $x$  in the interval  $[0, 2\pi)$  so that

$$\sec^2 x - \tan x - 1 = 0.$$

3. (2 points) If  $\theta$  is in quadrant II and  $\sin \theta = \frac{1}{4}$ , find  $\cos \theta$  and  $\cos 2\theta$ .