

# QUIZ 1

**Time: 10min**

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1. Describe the region in  $R^3$  determined by the equation  $xy = 0$ .
2. Write an equation for a cylinder of radius 1 around the  $y$ -axis.
3. **(Bonus)** Let  $\mathbf{v}$  be a nonzero vector. Show that  $\frac{\mathbf{v}}{|\mathbf{v}|}$  is a unit vector.

*Each problem is worth 5 pts.*