

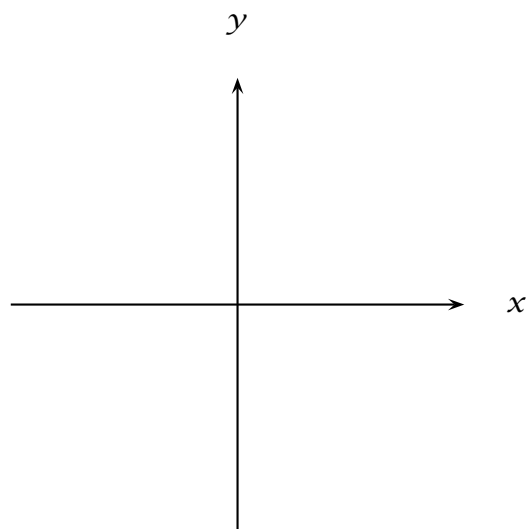
MA 227 §10.4-11.1	<b>Quiz #2</b>	score	Name: _____ 21 June 1999
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1. For each of the following equations, determine if there is a closely matching graph on the next page. If there is, report its Letter. If there is not, write NO MATCH. (6 points)

- (a)  $\mathbf{r}(u, v) = \langle u \cos v, u \sin v, u \rangle$  . . . . . \_\_\_\_\_  
(b)  $\mathbf{r}(u, v) = \langle u \cos v, u \sin v, v \rangle$  . . . . . \_\_\_\_\_  
(c)  $\mathbf{r}(u, v) = \langle 2 \cos u, 2 \sin u, v \rangle$  . . . . . \_\_\_\_\_  
(d)  $\mathbf{r}(u, v) = \langle u \cos v, u \sin v, u^2 \rangle$  . . . . . \_\_\_\_\_

2. Find the tangential and normal components of the acceleration vector for a particle in 3-space whose location vector at time  $t$  is given by  $\mathbf{r}(t) = \langle \cos t, \sin t, t \rangle$ . Explain what you answers mean. (7 points)

3. On the given set of axes, sketch the level curves for the function  $f(x, y) = xy$  that correspond the  $z$ -levels of -2, -1, 0, 1, and 2. Based on the level curves, describe the shape of the graph of the surface in 3-space in a few words. (7 points)



## Surfaces for Quiz 2

