

Math 32A. Quiz 3a January 31, 2006

**Solutions:**

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Write your solution on the exam sheet. Show some work and justify your answer. Do not just give the correct answer. You have 15 minutes. Good luck!

1. Find a vector function that represents the curve which is the intersection of the cylinder  $x^2 + y^2 = 4$  and the surface  $z = xy$ .

Solutions:  $\vec{r}(t) = 2 \cos t \vec{i} + 2 \sin t \vec{j} + 4 \cos t \sin t \vec{k}$ .