

10 minutes  
5 points for each question  
No calculators allowed

**Math 285.002**  
**Quiz 5**  
**October 20, 2000**

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Name

Do all of your work directly on this sheet, using the back for scratch if necessary. Circle your answers.

Throughout all exercises on this quiz,  $\mathbf{r}(t) = \langle 3 \cos t, 3 \sin t, 4t \rangle$  and  $C$  is the resulting curve. *Notice that formulas must have “=” in them somewhere! Use correct notation!*

1. Find a formula for the curvature  $\kappa(t)$  of  $C$ .
2. Assuming that  $\mathbf{r}(t)$  is a position vector, find a formula for the speed  $v(t)$ .