

Math230 quiz No. 4 , Sep. 28, Name: _____, Student ID: _____

Announcement: Midterm I: Next Thursday, Oct.05, 2006, 6:30-7:45PM 102 Forum.

(1) (2 points) Find a vector equation and parametric equations for the line segment that joints P and Q :

$$P(-2, 4, 0), Q(6, -1, 2)$$

(2) (2 points) Find parametric equations for the tangent line to the curve with the given parametric equations at the specified point:

$$x = e^{-t} \cos t, y = e^{-t} \sin t, z = e^{-t}; (1, 0, 1).$$

(3) (1 point) Find the curvature of the space curve:

$$\vec{r}(t) = 3t \vec{i} + 4 \sin t \vec{j} + 4 \cos t \vec{k}$$