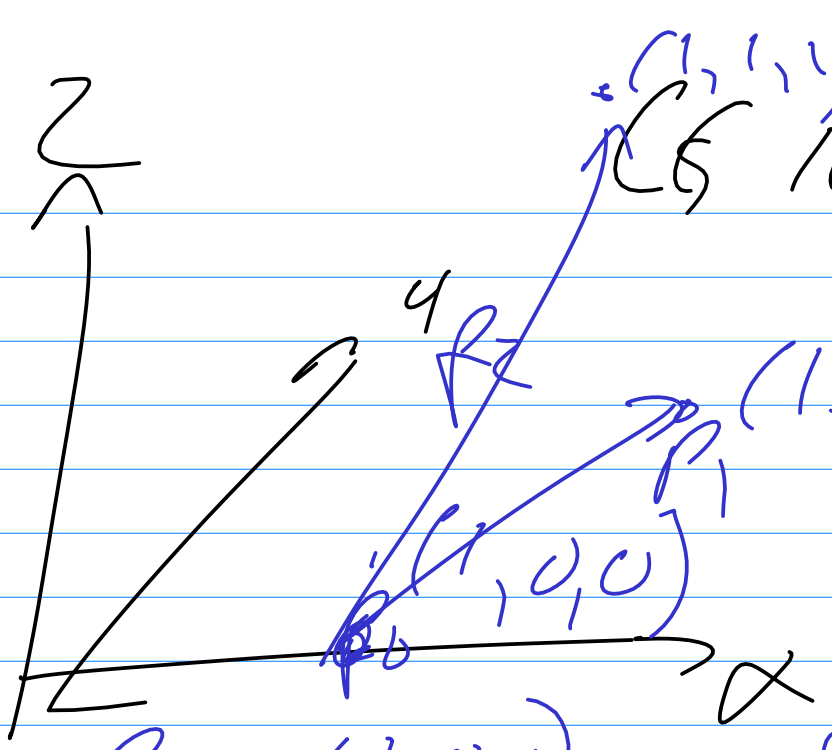
CS 10/26/17 p1



$P_0 = (1,0,0)$

$P_1 = (1,1,0)$

$P_2 = (1,1,1)$

$P_{01} = (\alpha^1, 0)$

$P_{02} = (\alpha, 1, 1)$

$P_{01} \wedge P_{02} = (1,0,0)$

$x^2 + y^2 + z^2 = 1$

$P = \left(\frac{3}{13}, \frac{4}{13}, \frac{12}{13}\right)$

$3^2 + 4^2 + 12^2 = 9 + 16 + 144 = 169$

QP $N = \left(\frac{3}{13}, \frac{4}{13}, \frac{12}{13}\right)$

2

$\vec{r}$ $x = \cos u \cos v$

$y = \cos u \sin v$

$z = \sin u$

$$\frac{\partial \vec{r}}{\partial u} = (-\sin u \cos v, -\sin u \sin v, \cos u)$$

$$\frac{\partial \vec{r}}{\partial v} = (-\cos u \sin v, \cos u \cos v, 0)$$

$$N = (\cos^2 u \cos v, -\cos^2 u \sin v, -\sin u \cos u \cos^2 v - \sin u \cos u \sin^2 v)$$

$$= (\cos^2 u \cos v, -\cos^2 u \sin v, -\sin u \cos u)$$

SIGN ERROR

$$= \cos u (\cos u \cos v, -\cos u \sin v, -\sin u)$$