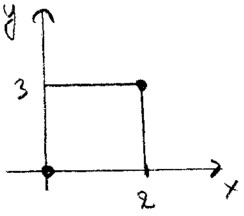
Quiz 3 Calc 3 11/11/2016

1. Parametrize and give bounds for the portion of the plane $z = 1$ lying above the rectangle with vertices (0,0), (2,0), (2,3), and (0,3).

$x(u,v) = u$
$y(u,v) = v$
$z(u,v) = 1$

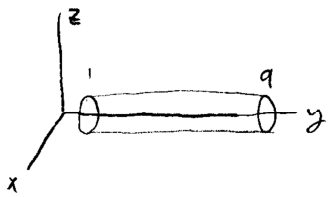
for $0 \le u \le 2$
$0 \le v \le 3$

top view:



Excellent!

2. Parametrize and give bounds for the portion of the cylinder with radius 4 centered around the y-axis between $y = 1$ and $y = 9$.



$x(u,v) = 4\cos(v)$
$y(u,v) = u$
$z(u,v) = 4\sin(v)$

$1 \le u \le 9$
$0 \le v \le 2\pi$

Good!

3. Parametrize and give bounds for the portion of the plane $x = 10$ that lies within the cylinder with equation $y^2 + z^2 = 1$ $r^2 = 1$ $\sqrt{r^2} = r = \sqrt{1} = 1$.

$x(u,v) = 10$
$y(u,v) = u\cos v$
$z(u,v) = u\sin v$

for $0 \le u \le 1$
$0 \le v \le 2\pi$

Great