

# Quiz #2A

Math 201 - 2

Sem 023

Name \_\_\_\_\_

I.D.# \_\_\_\_\_

Q1 Set up the polar integral to find the area inside the cardioid  $r = 3 \sin \theta$  and outside the circle

$$r = 1 - \sin \theta.$$

Q2 Find the equations of the two spheres centered at the origin and tangent to the sphere of radius 1, centered at (1,2,-2)

Q3 Find the vectors  $\mathbf{u}$  and  $\mathbf{v}$  if  $\mathbf{u} + \mathbf{v} = \mathbf{i} + \mathbf{j} + 2\mathbf{k}$  and  $3\mathbf{u} - 2\mathbf{v} = 2\mathbf{i} + 2\mathbf{j} + \mathbf{k}$