

NAME: _____ Group Nr: _____

Worksheet 09/21- MAC 2313, F'17

1. Sketch the region enclosed between $4x^2 + 4y^2 + z^2 = 5$ and $z = x^2 + y^2$ and describe their curve of intersection.

2. (a) Sketch the curve in the xy -plane given in polar coordinates by $r = 2 \cos(\theta)$.

(b) Sketch the curve in the xy -plane given in polar coordinates by $r = 2a \cos(\theta)$, where $a > 0$ is a constant.

(c) Sketch the surface in 3D given in cylindrical coordinates by $r = 2 \cos(\theta)$.

(d) Sketch the surface in 3D given in cylindrical coordinates by $r = 2z \cos(\theta)$.