

Homework questions for section 13.6, 13.7

Math 114, Spring 2008

1. Match the equation

$$-2x^2 + y^2 - 3z^2 = 5$$

with one of the labeled graphs in the text book on page 874.

- A) I B) II C) III D) V E) VI F) VIII

2. Match the equation

$$-2x^2 + y^2 - 3z^2 = 0$$

with one of the graphs in the text book on page 874.

A) I B) II C) III D) V E) VI F) VIII

3. Which set of inequalities represents the volume contained inside the sphere of radius 3 (with center $(0, 0, 0)$) and above the xy -plane?

A) $r \leq 3, 0 \leq \theta \leq \pi, z \geq 0$

B) $r \leq 3, 0 \leq \theta \leq 2\pi, z \geq 0$

C) $r \leq 3, 0 \leq \theta \leq \pi, 0 \leq z \leq 3$

D) $\rho \leq 3, 0 \leq \theta \leq 2\pi, 0 \leq \phi \leq \frac{1}{2}\pi$

E) $\rho \leq 3, 0 \leq \theta \leq 2\pi, 0 \leq \phi \leq \pi$

F) $\rho \leq 3, 0 \leq \theta \leq \pi, 0 \leq \phi \leq \pi$