## QUIZ 4 MATH 251

LAST NAME $\qquad$ FIRST NAME

On my honor, as an Aggie, I certify that the solution submitted by me is my own work. I had neither given nor received unauthorized aid on this work.

Signature: $\qquad$

Due Thursday 02/13 at the beginning of class.

- If turned in later than 10 minutes into class, 10 points off. No papers will be accepted after class.
- If you turn it in to my office (Blocker 245E) make sure you do it before 3:00pm, 02/13.
- YOUR WORK MUST BE NEAT, EASY TO FOLLOW.
- You may use notes and textbook, but not the help of anything else.

1. Find and sketch the domain of the function $z=\sqrt{9-x^{2}+y^{2}}$.
2. Let $f(x, y, z)=\sqrt{x y}+z^{2}+1$. Find an equation of the level surface that passes through the point $(1,4,-1)$.
3. Identify the level curves for each of the following functions. You don't need to sketch the graph just identify the type of curve (line, hyperbola, etc.):
(a) $f(x, y)=y^{2}-4 x$
(b) $f(x, y)=\ln \left(x^{2}+\frac{y^{2}}{4}\right)$
