MATH 1213 QUIZ #1-T

Name: [redacted] Roll number: [redacted]

Find a formula for the function $R : \mathbb{E}^2 \to \mathbb{E}^2$ given by rotation about the point $(0, 1)$ by $\frac{\pi}{2}$ radians counterclockwise. (Hint: Note that $R' = T^{-1} \circ R_{\frac{\pi}{2}} \circ T$, where $T(x, y) = (x, y - 1)$.)

MATH 1213 QUIZ #4-T

Name: [redacted] Roll number: [redacted]

Let $A \subseteq \mathbb{E}^n$ be a subset. Give the definitions for "*interior point* of A" and "A is *closed*".

MATH 1213 QUIZ #5-T

Name: [redacted] Roll number: [redacted]

Sketch the region in $\mathbb{E}^3$ bounded below by $z = \sqrt{x^2 + y^2}$ and bounded above by $z = 2 - x^2 - y^2$.

MATH 1213 QUIZ #6-T

Name: [redacted] Roll number: [redacted]

Let $f(x, y) = x\cos(y)$. Find the local maximum and minimum values and the saddle points, if any.