

$$1. \iint_R y^2 + u^2 dA, y^2 + u^2 \geq 0 \rightarrow \iint_R y^2 + u^2 dA \geq 0$$

$$2. \int_0^{2\pi} -2 \sin^2 \theta + \cos^2 \theta = -\pi$$

$$\iint_R 1 - 2 dA = -\pi$$