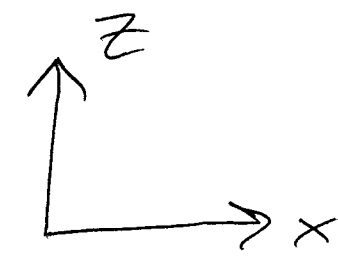


① Let C be the loop $\vec{r} = \langle 7 \cos t, 4, \sin t \rangle$ from $t=0$ to $t=2\pi$. Find a surface S and an orientation \vec{N} such that $C = \partial S$. HW
55

More precisely, give a parametrization $\langle x, y, z \rangle = \langle \boxed{?}, \boxed{?}, \boxed{?} \rangle$ for $(u, v) \in \boxed{?}$ of S and give a formula $\vec{N} dA = \boxed{?} du dv$ (with the \pm ambiguity resolved).

Hint: Plot C 's (x, z) -coordinates & use right-hand rule.



② For the field $\vec{F} = \langle y^3, z^3, x^3 \rangle$ & your S & \vec{N} from ①, verify that both sides of the Stokes' Theorem equation are actually equal.