1. Find an equation of the tangent plane to the surface

$$z = x \sin(x + y)$$

at the point $(-1, 1, 0)$.

Reading Question:

True or False: If $f(x,y)$ is a continuous function near $(a,b)$ and if $f_x(a,b) = 0$ and $f_y(a,b) = 0$, then $f$ has a local minimum or maximum at $(a,b)$. Explain briefly.