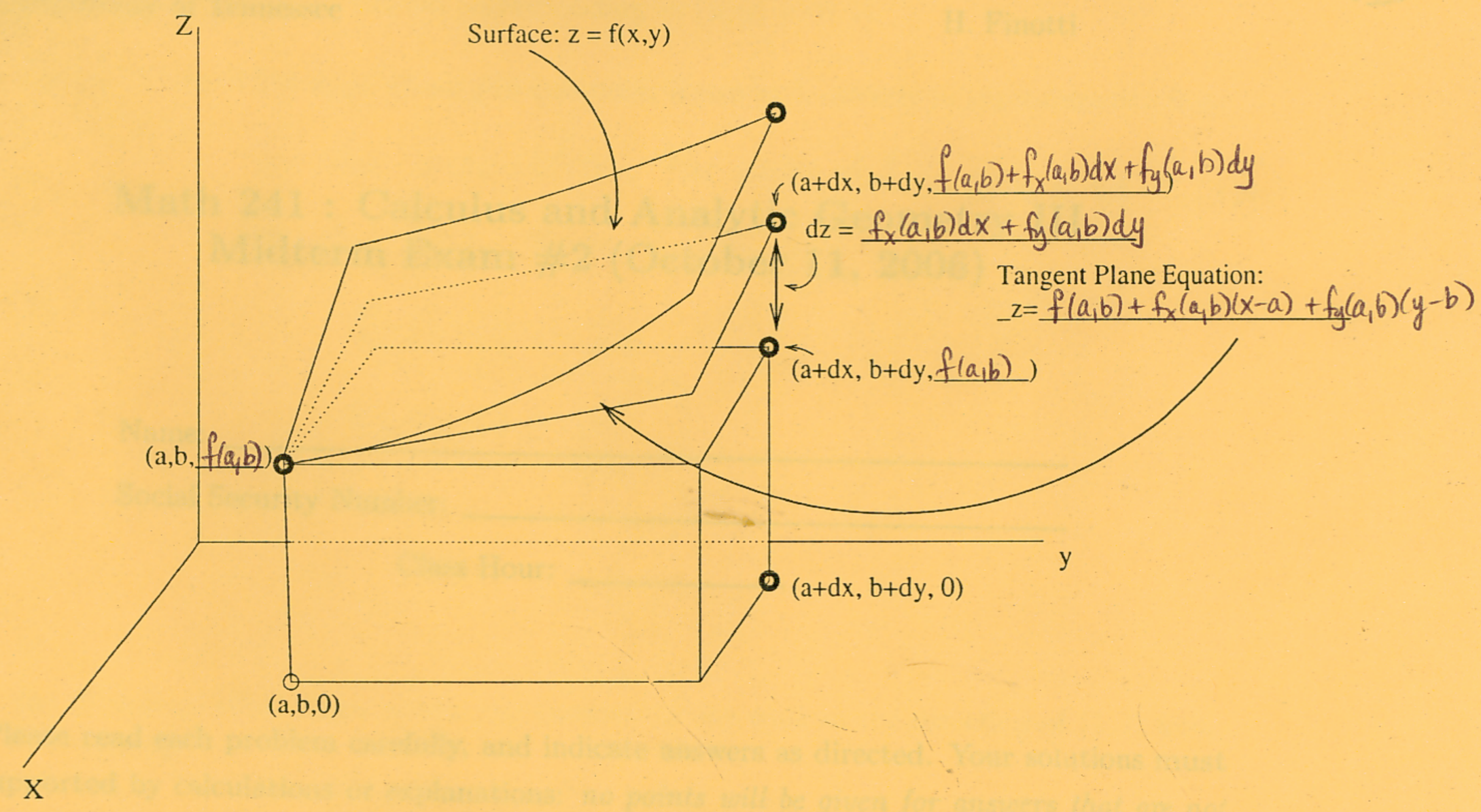
xtra Credit [4 points] Fill the blanks:



**OR [4 points] Explain how part (b) of problem 4 gives you information about whether or not the limit exists in part (a) of problem 4.

For example, since the height of f is always 2 along $y=-\frac{1}{2}x$, I could approach (0,0) along $y=-\frac{1}{2}x$ and would think my limit should be 2. Likewise, I could approach (0,0) along the $z=0$ level curve which is the y-axis and along here it looks like $f(x,y)$ goes to zero as $(x,y)\to(0,0)$. Since I can approach (0,0) along any of my level curves and each one of them has a different height, the limit as $(x,y)\to(0,0)$ cannot exist.