Class Worksheet 2/24/22

Example 1:

Find the equation of the plane tangent to $z = 3e^y + x + x^4 + 6$ at the point $(1, 0, 11)$.

The equation of the plane is [   ]

Example 2:

For the differentiable function $h(x, y)$, we are told that $h(600, 100) = 300$ and $h_x(600, 100) = 13$ and $h_y(600, 100) = -9$. Estimate $h(605, 96)$.

$h(605, 96) \approx$ [   ]

Example 3:

Find the differential of the function $f(x, y) = 11\sin(xy)$.

NOTE: Enclose arguments of functions in parentheses. For example, $sin(2x)$.

$df =$ [   ] $dx +$ [   ] dy