Math 226 – Quiz

Name _____

- **Write as neatly as you can!**
- **No calculators are allowed.**
- **You must show your work to obtain full credit.**

1. (*3 points*) Find the tangent plane to the level surface $xyz + z^2 \cos x = -4$ at the point $(\pi, 0, 1)$.

2. (*4 points*) Evaluate

$$\iint_R xye^{y^2+x^2} \mathrm{d}A$$

where $R = [0, 1] \times [0, 1]$.

3. (*3 points*) Set up the double integral of $f(x, y) = e^x \cos(y^{15})$ over region R bounded below by $y = x^3$ and above by $y = \sqrt{x}$ in two different ways. Do not evaluate this double integral.