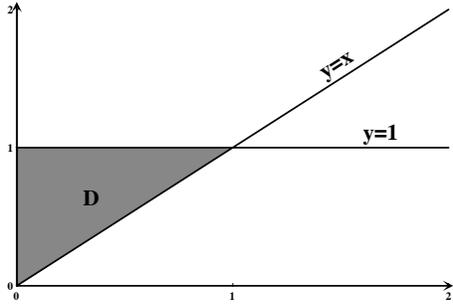


Exam II Answers
Math 126 E Autumn 2016

1. $a_T = 0$ and $a_N = 1$

2. $\iint_D e^{y^2} dA = \int_0^1 \int_0^y e^{y^2} dx dy = \frac{1}{2}(e - 1)$



3. $-\frac{2}{2016}(x - 1) - \frac{1}{2016}(y - 2) - (z - 1) = 0$ OR $2x + y + 2016z = 2020$

4. There is a saddle point at $(0, 0)$ and a local max at $(-\frac{1}{3}, -\frac{1}{3})$.

5. $V = \int_0^{2\pi} \int_0^{\sqrt{15}/8} \left(\frac{3}{4} + \sqrt{\frac{1}{4} - r^2} - \sqrt{1 - r^2} \right) r dr d\theta = \frac{29\pi}{768}$