Math 3330 - Quiz 5

Name:_____

1. Compute $\iint x - y \, dA$ over the region R contained within the the triangle defined by the three points $(0,0)$, $(1,4)$ and $(0,7)$.

2. Compute $\iint x^2 - y^2 \, dA$ over the region R contained within the functions $y = x^2$ and $x = y - 2$.

3. Compute $\iint e^{x^2} \, dA$ over the region R which is to the left of above the line $x = 6$ and to the right of the lines $y = 2x$ and $y = -3x$.

4. Compute $\iint \frac{1}{\ln(y)} \, dA$ over the region R is above the line $y = 1$ and below $y = 2$ between the $y = \frac{1}{x}$ and $y = \frac{-2}{x}$.

5. Set up the integral to compute the volume below the function $f(x,y) = 7 - x^2 - y^2$ and above the xy-plane. Do not compute the integral.

6. Set up the integral to compute the volume below the function $z = 2x - y + 5$ and abaove the function $f(x,y) = x^2 + y^2$. Do not compute the integral.