

Name: _____

MA 3330: Quiz 7

1. $\iint_R x + y \, dA$ over the region defined by $x + y = 2$ and the coordinate axes.
2. $\iint_R xy \, dA$ over the region defined by $y = x^2$ and the line $y = x + 1$.
3. $\iint_R e^{x^2} \, dA$ over the region defined by $y = -x$, $y = 2x$ and the vertical line $x = 4$.
4. $\iint_R e^{x^2+y^2} \, dA$ over the region defined by the portion of the circle $x^2 + y^2 = 4$ in the third quadrant.
5. $\iint_R \sqrt{\frac{\tan^{-1}(y/x)}{x^2 + y^2}} \, dA$ over the region defined by the portion of the circle $x^2 + y^2 = 4$ above the lines $y = -x$ and $y = x$.
6. Find the volume below the paraboloid $z = 12 - x^2 - y^2$ and above the xy -plane.