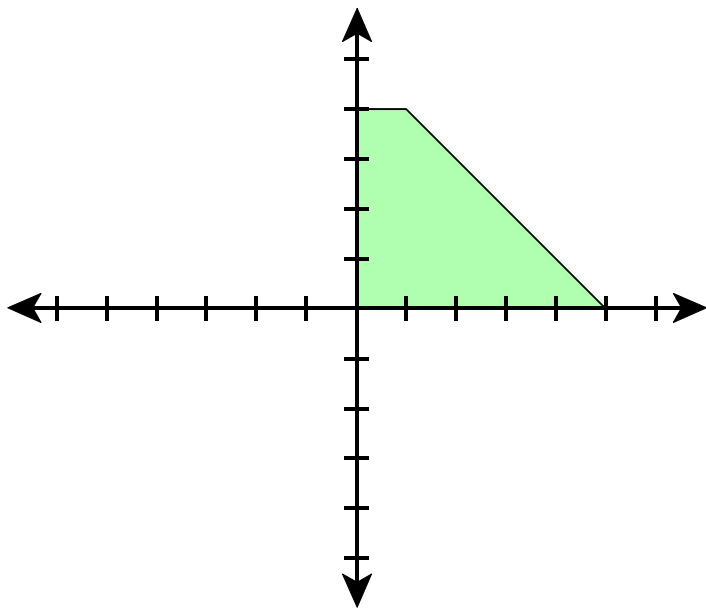


Quiz 2b Calc 3 11/1/2013

Each problem is worth 2 points. For full credit provide complete justification for your answers. Set up in terms of a single coordinate system, i.e., if you use cylindrical your integral should involve no x or y , etc.

1. Set up $\iint_R k(y+a) dA$, for R the triangle with vertices $(0,0)$, $(5,0)$, and $(0,3)$.

2. Set up an iterated integral for the volume below $z = x^2y$, above the region shown below.



3. Set up iterated integrals for $\iint_R x dA$, where R is the region outside a circle with radius 2, but inside a circle with radius 3, with $y \geq 0$.

4. Let R be the region in the xy -plane between $y = x^2$ and $y = 4x$. Set up an integral for the volume of the solid above R and below $f(x, y)$.

5. Set up an integral for the volume of the region bounded above by the top half of a sphere with radius 5 and below by the cone $z = \sqrt{x^2 + y^2}$.