Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Write $\int_R f \, dA$ as an iterated integral for the region $R$ shown below:

   bounded by $x = 1, x = 3, y = 4, y = x$

   $\frac{3-1}{3-1} = 1 \Rightarrow$ slope so $y = x$

   $\int_1^3 \int_{y=x}^{y=4} f(\,dA\,

   Great

2. Carefully sketch the region of integration represented by the integral $\int_{-2}^{2} \int_{-\sqrt{9-x^2}}^{\sqrt{9-x^2}} 2xy \, dy \, dx$.

   $-\sqrt{9-x^2}$ is the bottom half of a circle with radius 3

   the region we are looking for goes from the circle to zero and from $x = -2$ to $x = 0$

   Wonderful!