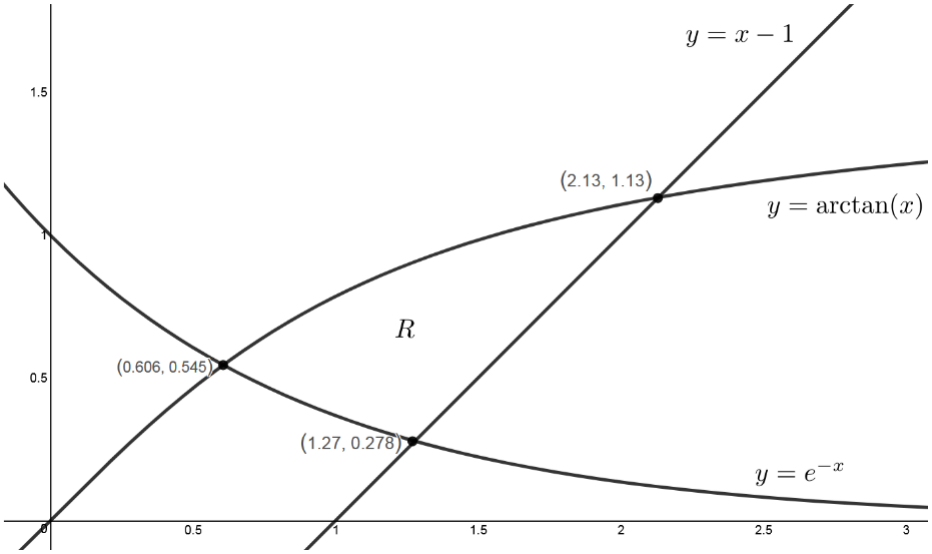
Written HW10 – MATH 3503 Fall 2021

Due by 27 September for timely completion credit

1. Consider $\iint_R f(x,y)\mathrm{d}A$, where R is the region bounded by curves as in the following picture:



   Set up, but **do not evaluate** the double integral as **both** a $\mathrm{d}x\mathrm{d}y$ and as a $\mathrm{d}y\mathrm{d}x$ integral.

2. Consider the following double integral: $\int_0^1 \int_{\sqrt{x}-1}^{1-x} f(x,y)\mathrm{d}y\mathrm{d}x$. Draw the region in the xy-plane being integrated over. For full credit, label all bounding curves and intersection points between those curves. Then, set up, **but do not evaluate** the double integral as a $\mathrm{d}x\mathrm{d}y$ double integral.