Full Name:

1. Sketch the region enclosed by the graphs of the given equations. Then, use a definite integral to find the exact value of the area of the region.

(a) 1

(b) $\frac{\sqrt{3}}{2}$ (c) $\frac{\pi}{12}$ (d) 2 - e(e) $\frac{1}{3}$ (f) $\frac{32}{3}$ (g) $\frac{81}{2}$ (h) $\frac{32}{3}$