

**Quiz 7**

1. Let  $\mathcal{D}$  be the unit disk. Suppose that the maximum of  $f(x, y)$  on  $\mathcal{D}$  is 4. What is the largest possible value for  $\int \int_{\mathcal{D}} f(x, y) dA$ ? (1 pt.)
  - (a) 4
  - (b)  $4\pi$
  - (c)  $\frac{4}{\pi}$
  
2. Let  $\mathcal{W}$  be the region bounded by  $z = 1 - y^2$ ,  $y = x^2$  and the plane  $z = 0$ . Calculate the volume of  $\mathcal{W}$  as a triple integral in the order  $dz dy dx$  (9 pt.)