

**MATH 243: SECTION 10.4 GROUPWORK**

- (1) Set up an integral to find the area of the region enclosed by the two curves

$$r = 4 \sin \theta$$

and

$$r = \cos \theta.$$

- (2) Set up an integral to find the arc length of the curve given by the polar equation

$$r = \theta^2$$

where  $0 \leq \theta \leq \pi$ .