

**MATH 243: SECTION 10.5 GROUPWORK**

- (1) Find the vertices and foci of the ellipse

$$x^2 + 9y^2 = 1$$

and sketch its graph.

- (2) Find the vertices, foci, and asymptotes of the hyperbola

$$\frac{y^2}{25} - \frac{x^2}{9} = 1$$

and sketch its graph.

- (3) Find an equation for the ellipse with vertices  $(\pm 3, 0)$  and foci  $(\pm 2, 0)$  and an equation for the hyperbola with vertices  $(\pm 2, 0)$  and foci  $(\pm 3, 0)$ .