MAT 122 Some Practice Re-Writing Ellipses and Hyperbolas in Standard Form.

On the right is what you start with. See if you can get the thing on the left by completing the square.

1. $\left(\frac{(x+7)}{3}\right)^2+\left(\frac{(y-8)}{11}\right)^2=1$ $\qquad 121x^2+9y^2+1694x-144y=-5416$

2. $\frac{(x-9)^2}{7^2}+\frac{(y+3)^2}{5^2}=1$ $\qquad 25x^2+49y^2-450x+294y=-1241$

3. $\frac{(x-9)^2}{7^2}-\frac{(y+3)^2}{5^2}=1$ $\qquad 25x^2-49y^2-450x-294y=-359$