Conics

Circle: $(x-h)^2+(y-k)^2=r^2$

Ellipse: $\frac{(x-h)^2}{a^2}+\frac{(y-k)^2}{b^2}=1$

Hyperbola: $\frac{(x-h)^2}{a^2}-\frac{(y-k)^2}{b^2}=1$ OR $\frac{(y-k)^2}{a^2}-\frac{(x-h)^2}{b^2}=1$

Identify each conic. Then describe the translation of the conic from standard position.

$$\frac{(x+1)^2}{3^2}+\frac{(y-2)^2}{5^2}=1$$

$$(x+1)^2+(y-1)^2=2^2$$

$$\frac{(x-3)^2}{2^2}-\frac{(y-1)^2}{1^2}=1$$

Sketch the ellipse $9x^2+4y^2-36x+24y+36=0$

Sketch the hyperbola $9x^2-y^2-18x-6y-9=0$