Keeper #7: General $\rightarrow $ Standard Form (circles and ellipses)

Find the center and radius: Find the center, vertices, and co-vertices:

$\left(x-5\right)^{2}+\left(y+3\right)^{2}=15$ $\frac{\left(x+1\right)^{2}}{4}+\frac{\left(y-4\right)^{2}}{25}=1$

State the coordinates of the foci:

$$\frac{\left(x-3\right)^{2}}{9}+\left(y+6\right)^{2}=1$$

Yesterday Recap

Vertices:

Co-vertices:

Foci:

Major axis:

Minor axis:

Eccentricity:

Completing the Square (remember??)

Ex. 1 $x^{2}+6x+ \\_\\_\\_\\_\\_$ $+ y^{2}-8x+\\_\\_\\_\\_\\_$ $=11+ \\_\\_\\_\\_\\_$ $+ \\_\\_\\_\\_\\_$

Ex. 2 $x^{2}-8x+\\_\\_\\_\\_\\_$ $+ 5y^{2}-30y=39$

Circles practice:

$x^{2}+y^{2}+6x-2y-6=0$ $x^{2}+y^{2}-8y+7=0$

$x^{2}+y^{2}+8x-4y+19=0$ $4x^{2}+4y^{2}+24x+12y-19=0$

Ellipses:

 

 