Name: _____

Ellipse

1) Name the shape described by each equation. Give the vertex of each parabola and the center of the ellipse

   1) $y^2+6y-x=0$

   2) $4x^2-8x+2y+11=0$

   3) $16x^2+25y^2-32x+100y-284=0$

   4) $9x^2+4y^2-72x+8y+104=0$

   5) $x^2+y^2-12x+10y+45=0$

2) Identify the graph of each equation. Then rewrite each equation in the general quadratic form, $Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$.

   1) $\frac{(x-2)^2}{4}+\frac{(y+3)^2}{9}=1$

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

   3) $\frac{(x-5)^2}{9}+\frac{(y-3)^2}{16}=1$

3) Identify the type of each of the following conics.

   1) $\frac{x^2}{16}+\frac{y^2}{4}=1$

   2) $4x^2-24x+4y^2+16y=190$

   3) $25x^2+9y^2=225$

   4) $x^2+y^2+4x-8y+15=0$

   5) $2x^2+y^2=4$

   6) $x^2+y^2-2x+4y+8=0$

   7) $5x^2+3y^2=1$