NOTES 11-8

Hyperbola - General Conic Form

Don't forget, the general form of the equation of a conic is

$$Ax^2 + By^2 + Cx + Dy + E = 0$$

In a hyperbola, A and B have different signs.

Standard form for hyperbola: $\frac{(x-h)^2}{a^2} - \frac{(y-k)^2}{b^2} = 1$ **or** $\frac{(y-k)^2}{a^2} - \frac{(x-h)^2}{b^2} = 1$

1. $11x^2 - 4y^2 - 22x - 16y - 49 = 0$

2. $4y^2 - x^2 + 2x + 24y + 19 = 0$

3. $25x^2 - 4y^2 + 16y - 116 = 0$

ASSIGNMENT 11-8

Name _____ **Date** _____ **Period** _____

Hyperbolas – General Conic Form

Identify the conic, and then convert each equation to standard form.

1. $9x^2 - y^2 - 72x + 8y + 119 = 0$ Conic:_____ _____

2. $4y^2 - 16y - 9x^2 - 36x - 164 = 0$ Conic:_____ _____

3. $y^2 - 12y - x^2 - 2x + 31 = 0$ Conic:_____ _____

4. $9y^2 - 16x^2 - 18y - 135 = 0$ Conic:_____ _____

5. $4x^2 - 8x + 144y + 36y^2 + 4 = 0$ Conic:_____ _____

6. $x^2 - 4x + 4y - 4 = 0$ Conic:_____ _____