

## CLASSIFYING CONICS

I can classify a conic as being either a circle, ellipse, hyperbola or parabola when it is in General Form.

General Form of a Conic:  $ax^2 + by^2 + cx + dy + e = 0$

Identify each of the following as a circle, ellipse, hyperbola, line or parabola.

1.  $3x^2 + 2x - y + 3 = 0$

2.  $3x^2 + 3y^2 - 12x + 18y - 6 = 0$

3.  $4x^2 + 3y^2 - 12x + 21y - 6 = 0$

4.  $3x + 5y - 6 = 0$

5.  $2x^2 - y^2 + 5x - 6y + 3 = 0$

6.  $5x^2 + 5y^2 - 3x + 2y - 7 = 0$

7.  $-2x^2 - 3y^2 + 7x - 8y + 2 = 0$

8.  $x^2 - 3y + 4 = 0$

9.  $x^2 - 2y^2 + 6x - 8y + 2 = 0$

10.  $4x^2 - y^2 + 4x - 12y + 18 = 0$