

## 11.6 Corrective Assignment - Classify Conics

Period \_\_\_\_\_

**Classify each conic section and write its equation in standard form.**

1)  $-x^2 - 6x + y - 12 = 0$

2)  $x^2 + y^2 + 6x + 8y + 24 = 0$

3)  $25x^2 + y^2 + 4y - 21 = 0$

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

5)  $x^2 + y^2 + 4x - 8y + 13 = 0$

6)  $x^2 + 10x + 3y + 28 = 0$

7)  $9x^2 - 4y^2 - 36x - 8y - 4 = 0$

8)  $3x^2 + 4y^2 - 12x - 16y - 32 = 0$

9)  $25x^2 + y^2 - 50x - 2y + 1 = 0$

10)  $25x^2 - 16y^2 + 50x - 375 = 0$

## Answers to 11.6 Corrective Assignment - Classify Conics (ID: 1)

1) Parabola

$$(x + 3)^2 = (y - 3)$$

2) Circle

$$(x + 3)^2 + (y + 4)^2 = 1$$

3) Ellipse

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

4) Hyperbola

$$(y + 4)^2 - x^2 = 1$$

5) Circle

$$(x + 2)^2 + (y - 4)^2 = 7$$

6) Parabola

$$(x + 5)^2 = -3(y + 1)$$

7) Hyperbola

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

8) Ellipse

$$\frac{(x - 2)^2}{20} + \frac{(y - 2)^2}{15} = 1$$

9) Ellipse

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

10) Hyperbola

$$\frac{(x + 1)^2}{16} - \frac{y^2}{25} = 1$$