

AA2 4.3

Name \_\_\_\_\_

### Classifying Conic Sections

Date \_\_\_\_\_ Period \_\_\_\_\_

**Classify each conic section.**

1)  $x^2 + y^2 = 30$

2)  $x^2 + y^2 = 36$

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

4)  $x = y^2$

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

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

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

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

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

9)  $-x^2 + 10x + y - 21 = 0$

10)  $-2y^2 + x - 20y - 49 = 0$

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

12)  $x^2 + y^2 + 6x - 2y + 9 = 0$

13)  $x^2 - y^2 - 2x - 8 = 0$

14)  $3x^2 + 30x + y + 79 = 0$

15)  $-9x^2 + y^2 - 72x - 153 = 0$

16)  $-y^2 + x + 8y - 17 = 0$