


Find more at



Chapter 12: Conics

Classifying a Conic Section (in Standard Form)

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

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

8) $x^2 - 4x - 36y^2 + 288y - 608 = 0$

2) $y = 6x^2 - 60x + 149$

9) $9x^2 + 4y^2 + 16y - 128 = 0$

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

10) $x^2 + 8x - 25y^2 + 50y - 34 = 0$

4) $x^2 - 2x - 36y^2 - 360y - 935 = 0$

11) $y = 5x^2 + 40x - 155$

5) $y = -3x^2 - 36x - 108$

12) $4x^2 + 9y^2 - 54y + 45 = 0$

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

13) $-9x^2 - 54x + 4y^2 - 40y - 125 = 0$

7) $x^2 + y^2 + 6x + 10y + 33 = 0$

14) $x^2 - 4x + 4y^2 - 32y + 32 = 0$

 *Classify each conic section.*

15) $x^2 - 4y^2 + 6x - 8y + 1 = 0$

19) $49x^2 + 9y^2 + 392x + 343 = 0$

16) $3x^2 + 3x + y + 79 = 0$

20) $-9x^2 + y^2 - 72x - 153 = 0$

17) $x^2 + y^2 + 4x - 2y - 18 = 0$

21) $-2y^2 + x - 20y - 49 = 0$

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

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