

HW textbook p. 721

Putting It All Together
with Conics

44. $x^2 = y^2 - 6x = 4y = 9 = 0$

$A = 1, C = 1$

$A = C \Rightarrow$ Circle

45. $x^2 + 4y^2 - 6x + 16y + 21 = 0$

$A = 1, C = 4$

$AC = 1(4) = 4 > 0 \Rightarrow$ Ellipse

46. $4x^2 - y^2 - 4x - 3 = 0$

$A = 4, C = -1$

$AC = 4(-1)$

$= -4 < 0 \Rightarrow$ Hyperbola

47. $y^2 - 4y - 4x = 0$

$A = 0, C = 1$

$AC = 0(1) = 0 \Rightarrow$ Parabola

48. $4x^2 + 3y^2 + 8x - 24y + 51 = 0$

$A = 4, C = 3$

$AC = 4(3)$

$= 12 > 0 \Rightarrow$ Ellipse

49. $4y^2 - 2x^2 - 4y - 8x - 15 = 0$

$A = -2, C = 4$

$AC = (-2)(4) = -8 < 0 \Rightarrow$ Hyperbola

50. $25x^2 - 10x - 200y - 119 = 0$

$A = 25, C = 0$

$AC = 25(0) = 0 \Rightarrow$ Parabola

51. $4x^2 + 4y^2 - 16y + 15 = 0$

$A = 4, C = 4$

$A = C \Rightarrow$ Circle