Non-Linear Equations in Two Variables
… No Answers

Section 11.4

For Exercises 44–47,

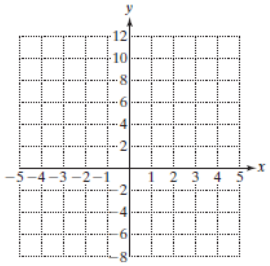
a. Identify each equation as representing a line, a parabola, a circle, an ellipse, or a hyperbola.

b. Graph both equations on the same coordinate system.

c. Solve the system analytically and verify the answers from the graph.

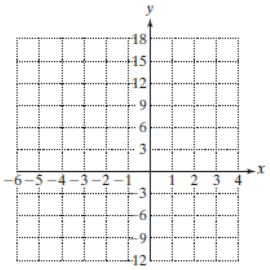
44. $3x + 2y = 10$

$y = x^2 - 5$



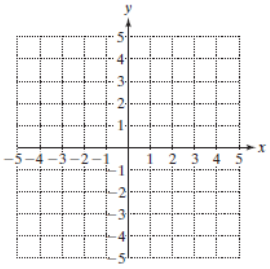
45. $4x + 2y = 10$

$y = x^2 - 10$



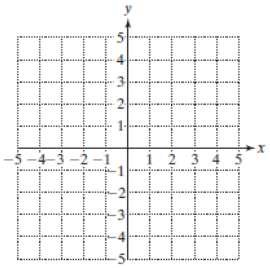
46. $x^2 + y^2 = 9$

$2x + y = 3$



47. $x^2 + y^2 = 16$

$x - 2y = 8$



For Exercises 48–53, solve the system of nonlinear equations by using either the substitution method or the addition method.

48. $x^2 + 2y^2 = 8$

$2x - y = 2$

49. $x^2 + 4y^2 = 29$

$x - y = -4$

50. $x - y = 4$

$y^2 = 2x$

51. $y = x^2$

$6x^2 - y^2 = 8$

52. $x^2 + y^2 = 10$

$x^2 + 9y^2 = 18$

53. $x^2 + y^2 = 61$

$x^2 - y^2 = 11$