

Solving Systems of Non-Linear Equations (7.4)

Analyzing Non-Linear Systems: *Identify each equation. Indicate the maximum number of solutions.*

1) $x - y + 1 = 0$
 $x^2 + y^2 = 13$

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

Solving Systems by Substitution: *Solve the system of equations by using substitution.*

3) $x - y + 1 = 0$
 $x^2 + y^2 = 13$

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

Solving Systems by Elimination: *Solve the system of equations by using elimination.*

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

6) $x^2 + y^2 = 25$
 $3x^2 + 2y^2 = 59$

Solving Systems of Non-Linear Equations: *Solve the system of equations using any method.*

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

8) $y = \log_3(x - 4)$
 $y = 2 - \log_3(x + 4)$