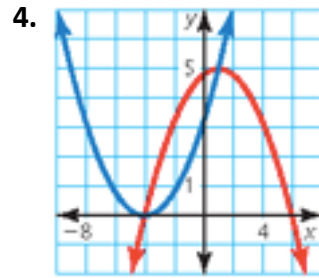
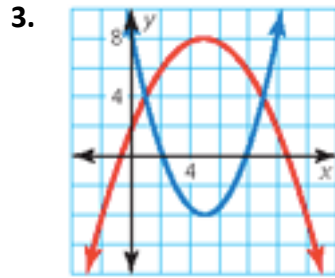
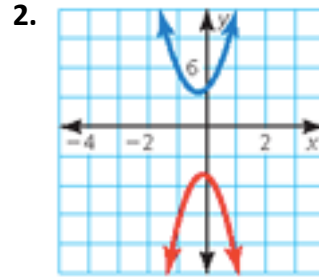
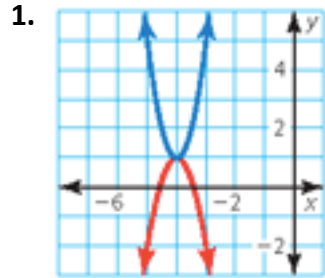


4.1 Solving Nonlinear Systems Homework

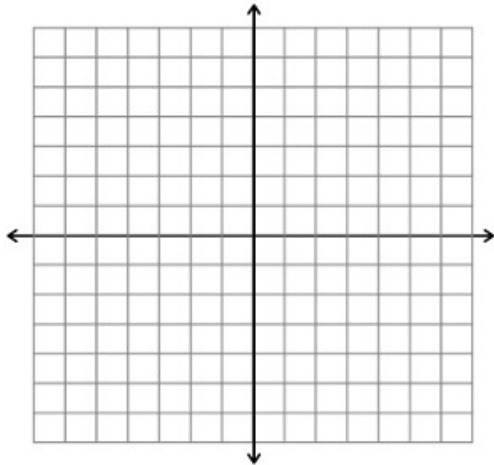
Solving by Graphing:

Solve the system of nonlinear equations using the graph.

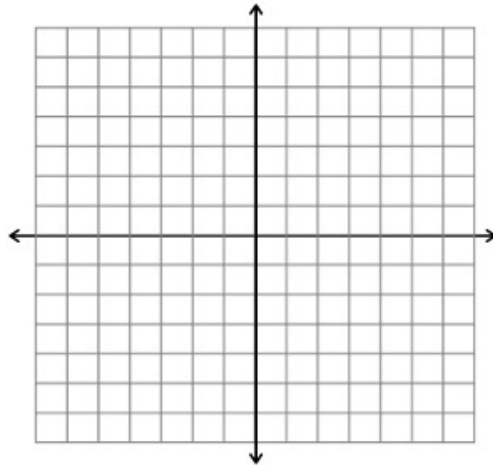


Solve the system by graphing.

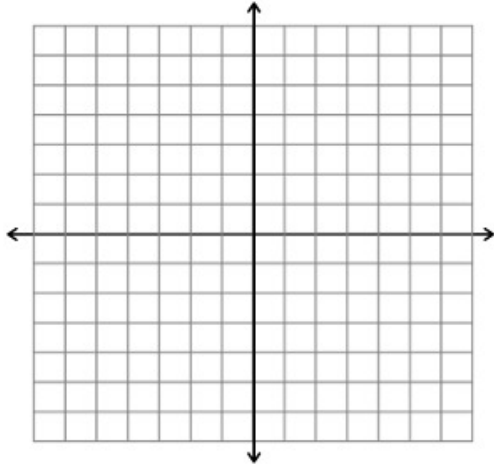
5. $y = x + 2$
 $y = 0.5(x + 2)^2$



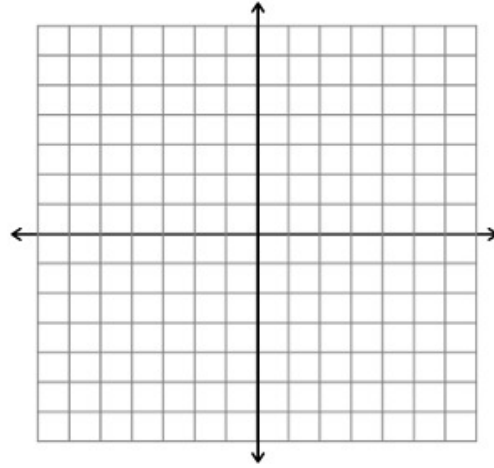
6. $y = (x - 3)^2 + 5$
 $y = 5$



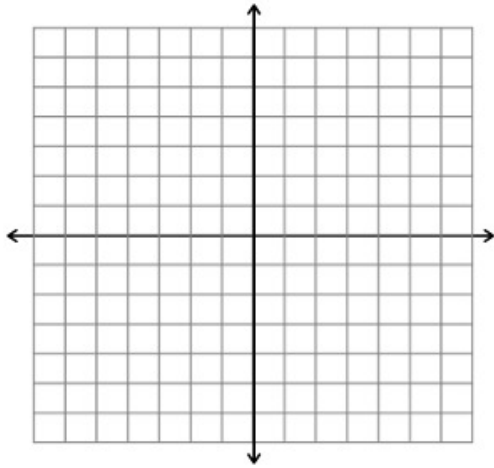
7. $y = \frac{1}{3}x + 2$
 $y = -3x^2 - 5x - 4$



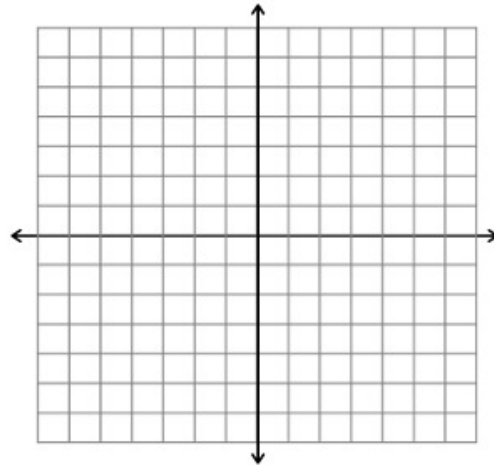
8. $y = -3x^2 - 30x - 71$
 $y = -3x - 17$



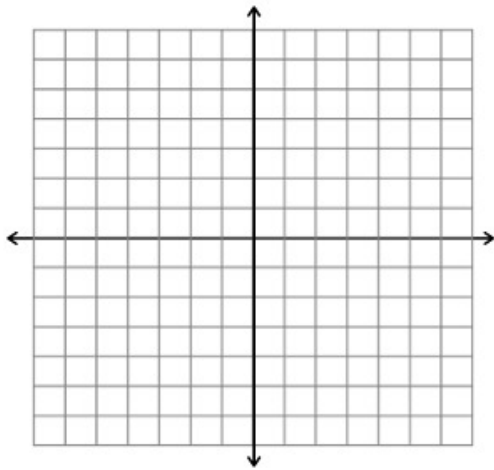
9. $y = x^2 + 8x + 18$
 $y = -2x^2 - 16x - 30$



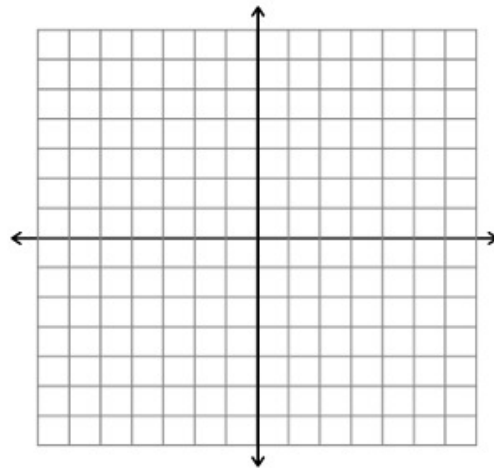
10. $y = -2x^2 - 9$
 $y = -4x - 1$



11. $y = (x - 2)^2$
 $y = -x^2 + 4x - 2$



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



Solving Using Substitution:

Solve the system by substitution.

13. $y = x + 5$
 $y = x^2 - x + 2$

14. $x = 3$
 $-3x^2 + 4x - y = 8$

15. $2x^2 + 4x - y = -3$
 $-2x + y = -4$

16. $2x - 3 = y + 5x^2$
 $y = -3x - 3$

17. $y = x^2 - 1$
 $-7 = -x^2 - y$

18. $y + 16x - 22 = 4x^2$
 $4x^2 - 24x + 26 + y = 0$

Solve Using Elimination:

Solve the system by elimination.

19.
$$\begin{aligned} 2x^2 - 3x - y &= -5 \\ -x + y &= 5 \end{aligned}$$

20.
$$\begin{aligned} -3x^2 + 2x - 5 &= y \\ -x + 2 &= -y \end{aligned}$$

21.
$$\begin{aligned} -3x^2 + y &= -18x + 29 \\ -3x^2 - y &= 18x - 25 \end{aligned}$$

22.
$$\begin{aligned} y &= -x^2 - 6x - 10 \\ y &= 3x^2 + 18x + 22 \end{aligned}$$

23. $y + 2x = -14$
 $-x^2 - y - 6x = 11$

24. $y = x^2 + 4x + 7$
 $-y = 4x + 7$

25. $y = -3x^2 - 30x - 76$
 $y = 2x^2 + 20x + 44$

26. $-10x^2 + y = -80x + 155$
 $5x^2 + y = 40x - 85$