Systems of Equations Class Work

🕊 **Objective:** *You will be able to identify how many solutions a system of equation will have, and solve systems of equations by graphing.*

Systems of Equations

Solutions to Systems

★ *Determine how many solutions each system will have. Support your answer.*

1. $y = -x + 1$
   $x = -y - 1$

2. $-4y = 4 + x$
   $\frac{1}{4}x + y = -1$

3. $3x + 6y = 18$
   $3y + 1.5x = 9$

4. $2y = 4x - 8$
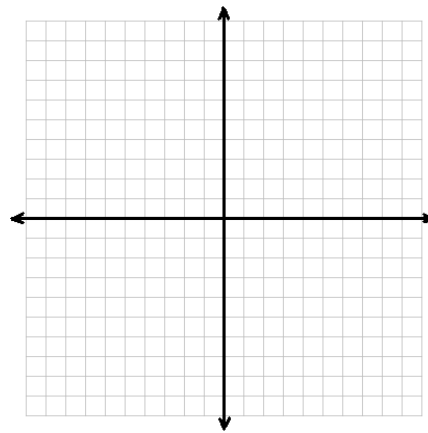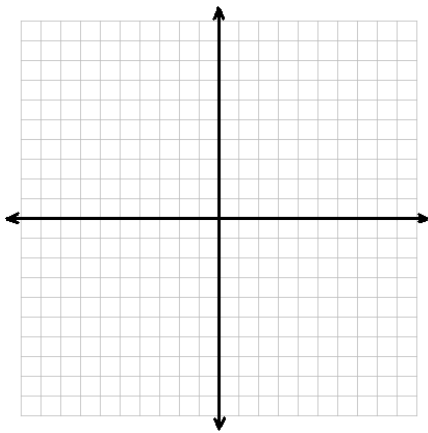 $10 - 3y = -6x$

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

6. $5y - 10 = -7x$
   $10y + 14x = 20$

★ *Solve each system of equations.*
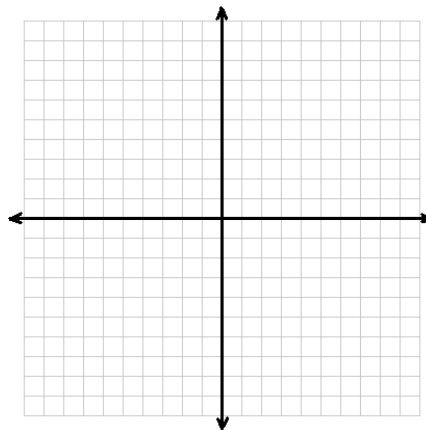*Support your solution with a graph, and check your solution algebraically.*
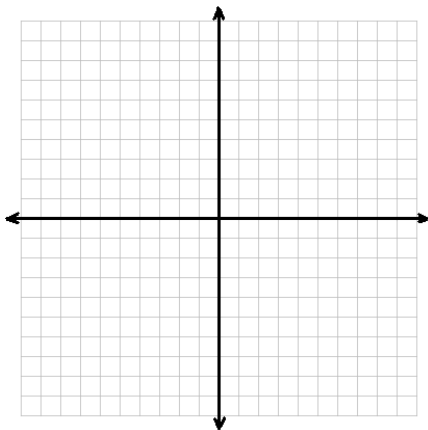
1. $2x + y = 8$
   $-2x - 2y = 10$
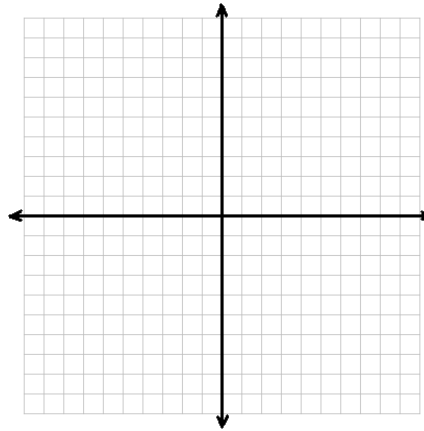
2. $2x + 4y = -14$
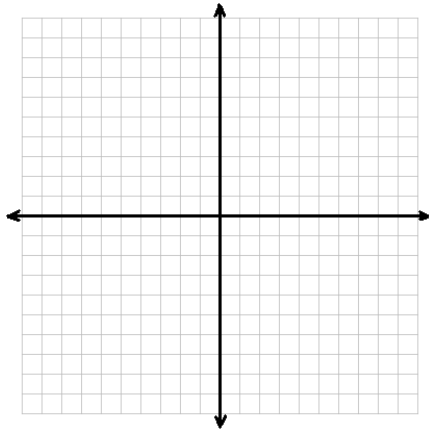 $4x - 6y = 0$

3. $-2x - 4y = -10$
   $-x - 2y = -4$

4. $2y = -3x - 4$
   $-4y = x - 12$
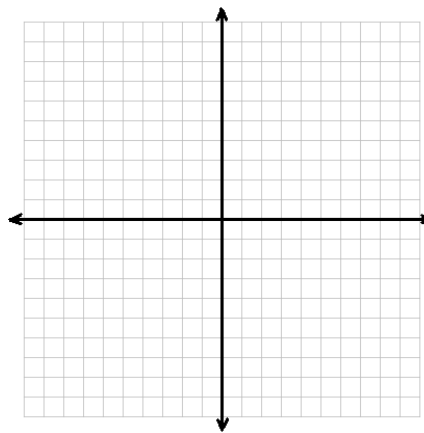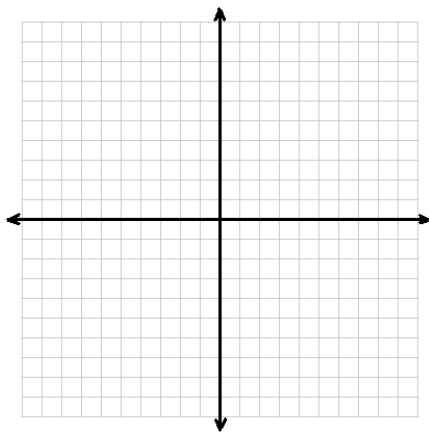
5. $4y + 16 = -\frac{1}{2}x$
    $8y + 32 = -x$

6. $3y - 9 = 6x$
    $|x + 2| - 1 = y$

7. $y = 9$
    $x = -8$

8. $y = |x - 3|$
    $-\frac{1}{2}y = |x - 3|$

CLOSER (on a post-it) ☺

Write down any **C**oncept you **L**earned, along with **O**ne **S**pecific **E**xample. How is this concept **R**elevant to the real world, problem solving, and/or mathematics in general?