

# Day 3: Solving Systems of Equations by Graphing

Date \_\_\_\_\_

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1) A System of Equations is a set of equations with the same \_\_\_\_\_ or \_\_\_\_\_.

The solution(s) to a system of equations are the \_\_\_\_\_ of \_\_\_\_\_ and are to be written as \_\_\_\_\_ pairs.

A system of equations can have:

Two Real Solutions:

One Real Solution:

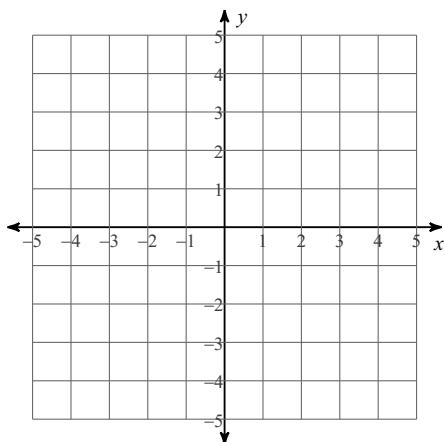
No Real Solutions:

2) To Solve a System of Equations by Graphing:

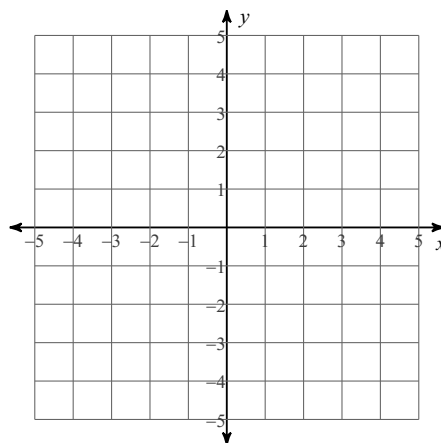
- Graph each equation
- Find the points of intersection (where they cross)
- Write your solution as an ordered pair.

**Solve each system by graphing.**

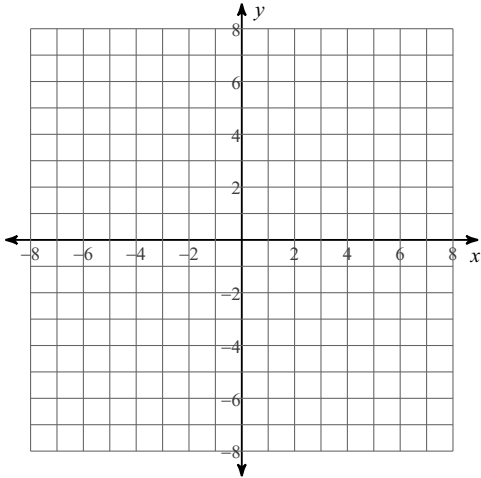
3)  $y = x - 2$   
 $y = -x + 4$



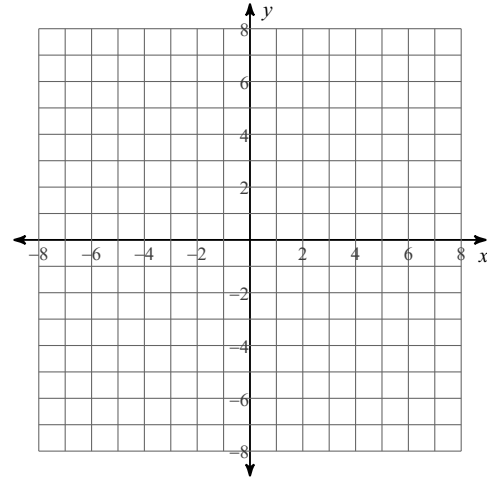
4)  $y = -2x + 4$   
 $y = -\frac{1}{2}x - 2$



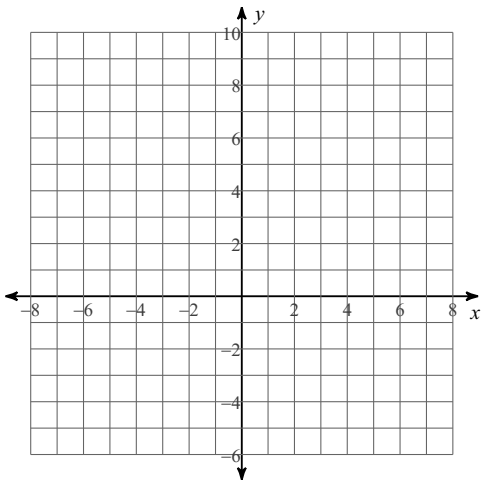
$$5) \begin{aligned} y &= (x+1)^2 - 3 \\ y &= 2x - 2 \end{aligned}$$



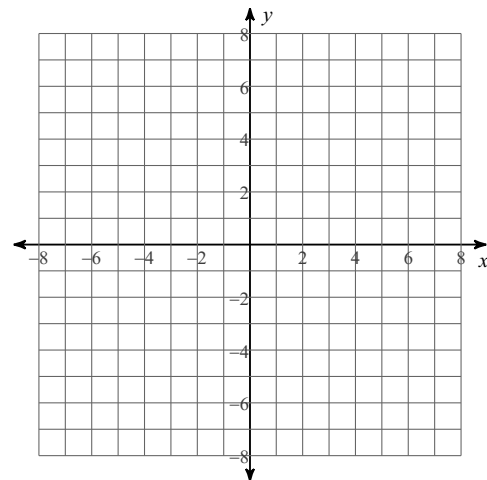
$$6) \begin{aligned} y &= 3x \\ y &= x^2 + 4x - 2 \end{aligned}$$



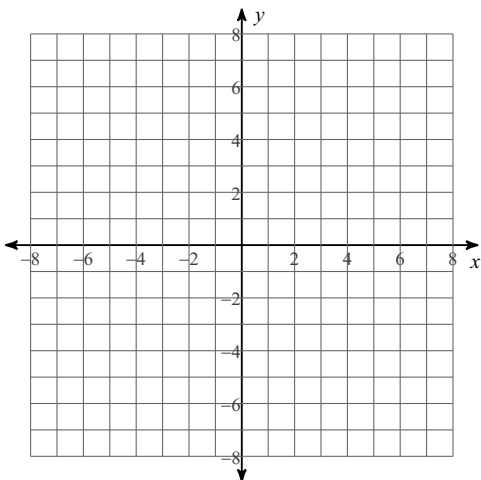
$$7) \begin{aligned} y &= (x-2)(x-4) \\ y &= x + 2 \end{aligned}$$



$$8) \begin{aligned} y &= -4x + 8 \\ y &= -(x+2)^2 + 5 \end{aligned}$$



$$9) \begin{aligned} y &= x^2 \\ y &= -x^2 + 8 \end{aligned}$$



$$10) \begin{aligned} y &= 4 - x \\ x^2 + y^2 &= 16 \end{aligned}$$

