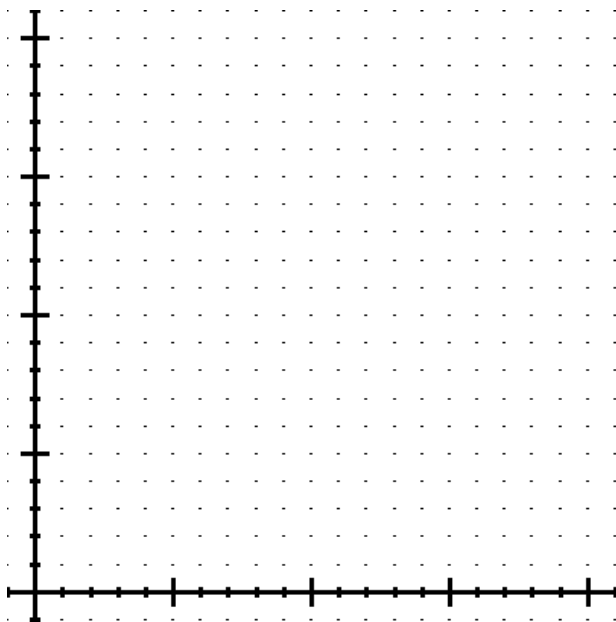


Example: Adam and Brooke visit their grandfather over winter break, but their grandfather has forgotten their ages! He does remember that Adam is 5 years older than Brooke, while the sum of their ages is 19. How old are the grandchildren?

Constraint:

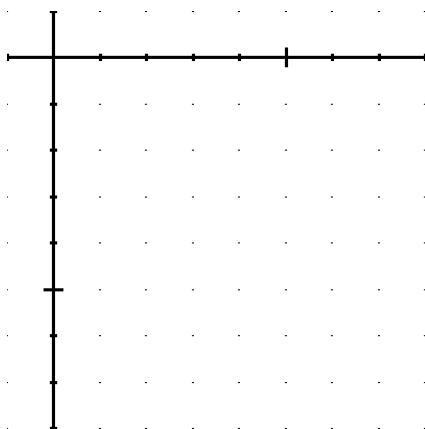
System:



Solution to a System:

Find the solution to this system:

$$\begin{aligned} -x + y &= -7 \\ x + 4y &= -8 \end{aligned}$$



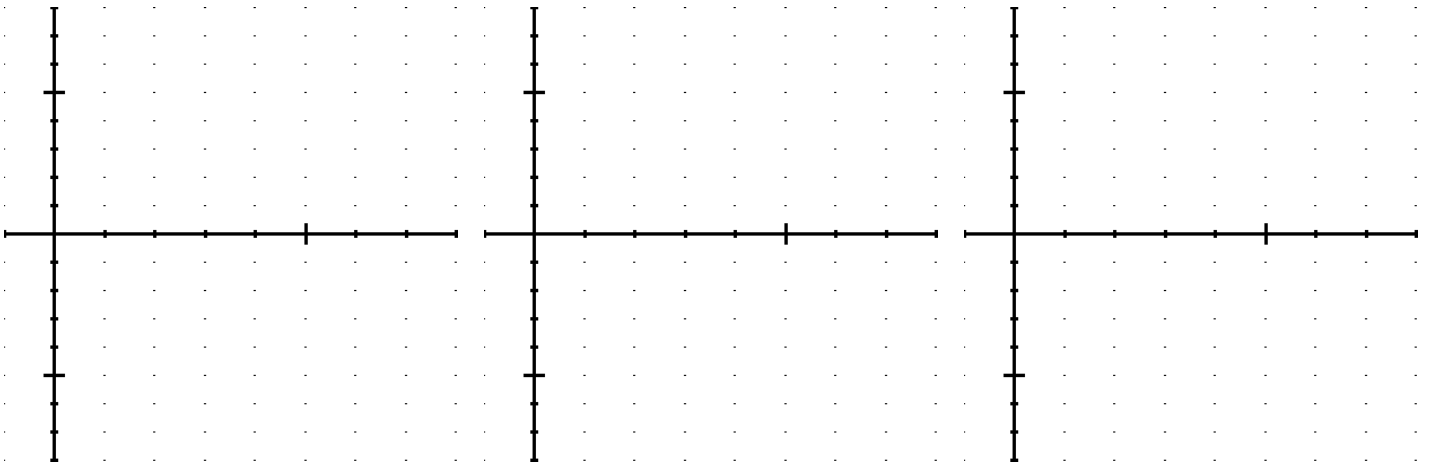
Solution: _____

Types of Solutions

$$y = x + 1$$
$$y = 2x - 4$$

$$2x + 3y = 6$$
$$2x + 3y = 12$$

$$y = 2x + 3$$
$$2y = 4x + 6$$



Solving via the Calculator

- 1) Write both equations in slope-intercept form
- 2) Enter both equations into Y= on your calculator
- 3) Press Graph - change the Window if you can't see an intersection
- 4) Press 2nd Trace (Calc) - choose option 5 (intersect)
- 5) Press Enter twice, move your cursor towards the point of intersection, and hit Enter one more time

A) Solve

$$3x - 4y = 12$$

$$y = \frac{3}{2}x$$

B) Solve

$$\frac{3}{4}x + \frac{1}{4}y = \frac{13}{2}$$

$$x - \frac{3}{4}y = \frac{13}{2}$$

C) Solve

$$-1.6x - 3.2y = -24$$

$$2.6x + 2.6y = 26$$