

Systems of Equations: Lesson 1

Introduction and Solving by Graphing: Worksheet 1

Name: answer key!

MATH ALL

Which of these points are a solution to the system?

| | | | |
|--|---|---|---|
| $(4, -10)$ | $(5, -15)$ | $(1, 3)$ | $\begin{cases} y = -4x + 5 \\ y = x - 20 \end{cases}$ |
| $(4, -10): \overset{-10}{y} = -4\overset{4}{x} + 5 \quad -10 \stackrel{?}{=} -4(4) + 5 \quad -10 \neq -11 \quad \text{!!}$ | $(5, -15): \overset{-15}{y} = -4\overset{5}{x} + 5 \quad -15 \stackrel{?}{=} -4(5) + 5 \quad -15 = -15 \quad \text{!!}$ | $(1, 3): \overset{3}{y} = 1\overset{1}{x} - 20 \quad 3 \stackrel{?}{=} 1 - 20 \quad 3 \neq -19 \quad \text{!!}$ | $(5, -15): \overset{-15}{y} = \overset{5}{x} - 20 \quad -15 \stackrel{?}{=} 5 - 20 \quad -15 = -15 \quad \text{!!}$ |
| $(5, -15)$ | | | We don't have to try $(1, 3)$ |

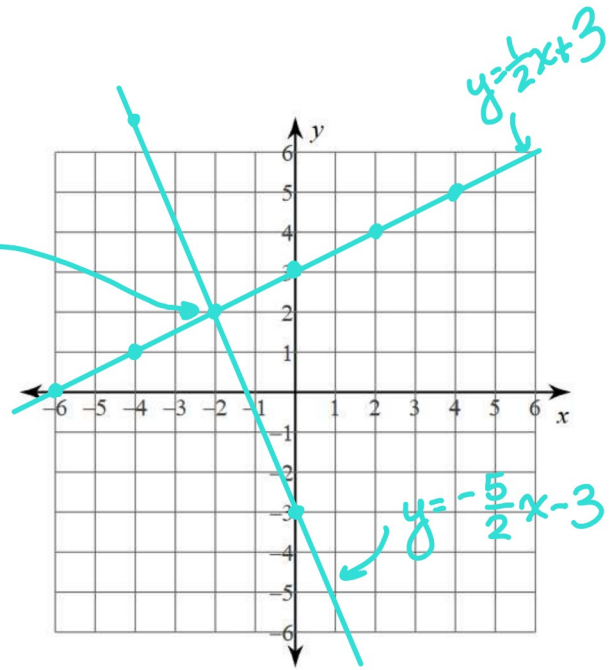
Which of these points are a solution to the system?

| | | | |
|---|--|--|--|
| $(4, 8)$ | $(0, -15)$ | $(-2, -10)$ | $\begin{cases} y = 3x - 4 \\ y = \frac{-5}{2}x - 15 \end{cases}$ |
| $(4, 8): \overset{8}{y} = 3\overset{4}{x} - 4 \quad 8 \stackrel{?}{=} 3(4) - 4 \quad 8 = 8 \quad \text{!!}$ | $(0, -15): \overset{-15}{y} = 3\overset{0}{x} - 4 \quad -15 \stackrel{?}{=} 0 - 4 \quad -15 \neq -4 \quad \text{!!}$ | $(-2, -10): \overset{-10}{y} = 3\overset{-2}{x} - 4 \quad -10 \stackrel{?}{=} 3(-2) - 4 \quad -10 = -10 \quad \text{!!}$ | $(-2, -10)$ |
| $(4, 8): \overset{8}{y} = -\frac{5}{2}\overset{4}{x} - 15 \quad 8 \stackrel{?}{=} -\frac{5}{2} \cdot \frac{4}{1} - 15 \quad 8 \neq -25 \quad \text{!!}$ | $(-2, -10): \overset{-10}{y} = -\frac{5}{2}\overset{-2}{x} - 15 \quad -10 \stackrel{?}{=} -\frac{5}{2} \cdot \frac{-2}{1} - 15 \quad -10 = 5 - 15 \quad \text{!!}$ | | |

What is the solution to the system:

$$\begin{cases} y = \frac{1}{2}x + 3 \\ y = \frac{-5}{2}x - 3 \end{cases}$$

$(-2, 2)$



What is the solution to the system:

$$\begin{cases} y = 3x \\ y = -2x + 5 \end{cases}$$

$(1, 3)$

