

Name:

ANSWERS!

Class:



Communication



Successful Partnership



Encouragement



Solving Problem Together



Collaboration

For each, write: (i) "One Solution" (ii) "No Solutions" or (iii) "Infinite Solutions"

Question 01

$$\begin{cases} y = 12x - 8 \\ y = 12x + 8 \end{cases}$$

same slope
different y-int

parallel
lines

No
Solutions

Question 02

$$\begin{cases} y = -3x + 4 \\ y = -3x + 4 \end{cases}$$

same slope
same y-int

same
line

Infinite
Solutions

Question 03

$$\begin{cases} y = 3x + 1 \\ y = 4x + 1 \end{cases}$$

different slope

will
cross
once

one
solution

Question 04

$$\begin{cases} y = 4x + 4 \\ y = -4x + 4 \end{cases}$$

different slope

will
cross
once

one
solution

Question 05

$$\begin{cases} y = 0.25x + 7 \\ y = \frac{1}{4}x + 7 \end{cases}$$

same slope
same y-int

Infinite Solutions

Question 06

$$3 \begin{cases} 3x + y = 8 \\ x + 3y = 8 \end{cases} \quad \begin{aligned} 3x + y &= 8 \\ 3x + 9y &= 24 \end{aligned}$$

Different balance of X's to Y's means different Slopes

One Solution

Question 07

$$3 \begin{cases} x + y = 4 \\ 3x + 3y = 12 \end{cases} \quad \begin{aligned} 3x + 3y &= 12 \\ 3x + 3y &= 12 \end{aligned}$$

same line!

Infinite Solutions

Question 08

$$2 \begin{cases} 2x + 2y = 10 \\ x + y = 20 \end{cases} \quad \begin{aligned} 2x + 2y &= 10 \\ 2x + 2y &= 40 \end{aligned}$$

same slope
different y-int

No Solutions

Question 09

$$\begin{cases} 4x + 2y = 3 \\ 2y + 4x = 6 \end{cases} \quad \begin{aligned} 4x + 2y &= 3 \\ 4x + 2y &= 6 \end{aligned}$$

same slope
different y-int

No Solutions

Question 10

$$\begin{cases} 4x + 2y = 9 \\ 2y + 4x = 9 \end{cases} \quad \begin{aligned} 4x + 2y &= 9 \\ 4x + 2y &= 9 \end{aligned}$$

same line!

Infinite Solutions