Find and sit in new seat!

Grab a Week #10 Packet

Bell Ringer

Monday 10/21

A music website charges x dollars for individual songs and y dollars for entire albums. Josh pays $25.92 to download 6 individual songs and 2 albums. Kate pays $33.93 to download 4 individual songs and 3 albums.

1. Write a system of linear equations that represents this situation.

$3(6x + 2y = 25.92)$
$-2(4x + 3y = 33.93)$

2. How much does the website charge to download an individual song? An entire album?

$18x + 6y = 77.76$
$-8x - 6y = -67.86$

$\frac{10x}{10} = \frac{9.9}{10}$

$x = .99$

$6(.99) + 2y = 25.92$
$5.94 + 2y = 25.92$
$-5.94 \quad -5.94$

$\frac{2y}{2} = \frac{19.98}{2}$

$y = 9.99$

album $9.99
song 99¢
$1.99

correct Elimination - Day 1!

Math 1 Honors Name_____

Solving Systems by Elimination - Day 1 Date_____ Hour____

Solve each system by elimination.

1) $-x + 5y = 13$
$x + y = 11$

(7, 4)

+ 1

2) $-4x + 6y = -30$
$-6x - 6y = -30$

(6, –1)

+ 1

3) $5x - 6y = -27$
$-5x + 3y = 6$

(3, 7)

4) $9x - 5y = -22$
$-9x + 8y = -8$

(–8, –10)

+ 1

5) $3x - y = 27$
$3x - 4y = 18$

(10, 3)

+ 1

6) $-x - 2y = 5$
$-x - y = 7$

(–9, 2)

+4

7) $-4x - 8y = 20$
$-10x - 8y = 14$
$(1, -3)$

8) $5x - 9y = 7$
$5x + y = -23$
$(-4, -3)$

+1

+1

9) $11 = -3y + 5x$
$23 = 5x + y$
$(4, 3)$

10) $3x = -2y - 7$
$0 = 3x - 23 + 2y$
$(5, 4)$

11) $17 + 3x + y = 0$
$11 - 2y = -3x$
$(-5, -2)$

12) $2x + 2 = 9y$
$8 = -8x + 9y$
$(-1, 0)$

+1

13) $-5x - 10y = -15$
$18 - 5x = 7y$
$(5, -1)$

14) $2 = 4y - 2x$
$4y = -x + 17$
$(5, 3)$

+1

+4

-2

Week #9 Packet due tomorrow!

5.3 Elmimination - Day 2 online hw due tomorrow!

Review...

A phone company charges $0.04 per minute for local calls and $0.12 per minute for international calls. When your bill comes, it states that you accumulated 540 minutes with a charge of $30.64. How many minutes of each type did you use?

x: # local min 427
y: # int. min 113

$x + y = 540$ $-y$ $x = 540 - y$

$.04x + .12y = 30.64$

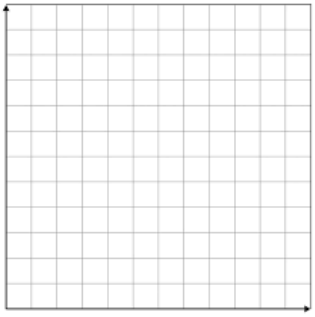
$x + 113 = 540$ -113 -113 $x = 427$

$.04(540 - y) + .12y = 30.64$

$21.6 - .04y + .12y = 30.64$ -21.6

$\frac{.08y}{.08} = \frac{9.04}{.08}$ $y = 113$ min

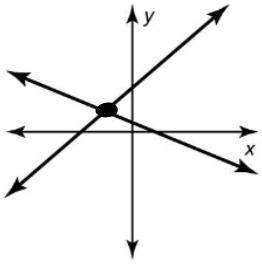
Review...



Solutions of Systems of Linear Equations

A system of linear equations can have *one solution*, *no solution*, or *infinitely many solutions*.

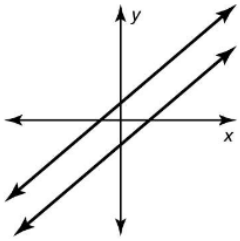
Lines intersect once



1 solution(s)

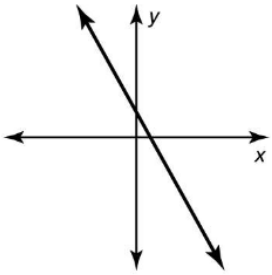
(,)

Lines are parallel



0 solution(s)

Lines are the same



∞ solution(s)

Determine if the system has 1, none or infinite solutions

$y = 3x - 7$

$y = 3x + 4$

no sol

$2x + 3y = 1$

$-2x + 3y = -7$

$\frac{6y}{6} = \frac{6}{6}$

$y = 1$

1 sol

$2x + 3 = 1$

$-3 \quad -3$

$2x = -2$

$(-1, 1)$

Determine if the system has 1, none or infinite solutions

$$\begin{array}{r} 6x + 6y = -3 \\ -6x - 6y = 3 \\ \hline 0 = 0 \end{array}$$

∞ sol

$-1(6x+6y=-3)$

$$\begin{array}{r} x + 3y = 6 \\ -x - 3y = 3 \\ \hline 0 = 9 \end{array}$$

No sol

Determine if the system has 1, none or infinite solutions

$$2x - 3y = 10$$
$$-2x + 3y = -10$$

$$0 = 0$$

∞ sol

$$2x - 5y = -3$$
$$3x + 5y = 8$$

$$\frac{5x}{5} = \frac{5}{5}$$

1 sol

$x = 1$

$(1, 1)$

Determine if the system has 1, none or infinite solutions

$$2x - 4y = 2$$
$$-2x - 4y = 6$$

$$-8y = 8$$

$$y = -1$$

$(-1, -1)$

$$2(4x + 3y = 17)$$
$$-8x - 6y = 34$$

$$0 = 68$$

NO SOL

Determine if the system has 1, none or infinite solutions

$15x - 6y = 9$

$-5x - 2y = 27$

$-15x + 6y = -81$

$0 = -72$

No sol

$2(-3x - 5y = 8)$

$6x + 10y = -16$

$-6x - 10y = 16$

$0 = 0$

∞ sol

Determine if the system has 1, none or infinite solutions

$18x + 12y = 24$

$-6(3x + 2y = 6)$

$-18x - 12y = -36$

$0 = -12$

No sol

$y = 5x - 1$

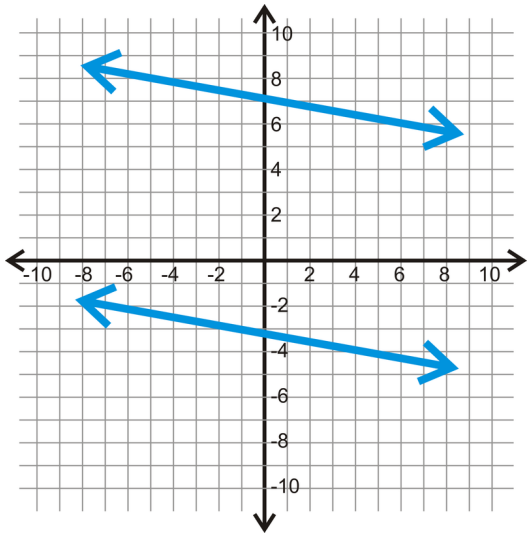
$y = -5x + 5$

1 Sol

Corners

Infinite, None or One...?

How many solutions are there to the system?



None

How many solutions are there to the system?

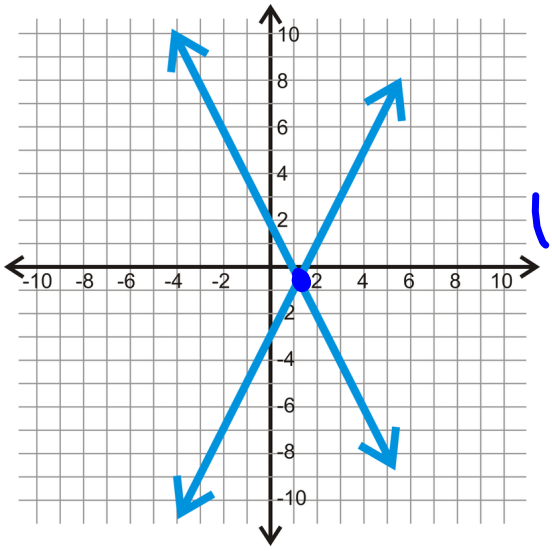
$$-2y = 8x - 14$$

$$2y = -8x + 14$$

$0 = 0$

∞ sol

How many solutions are there to the system?



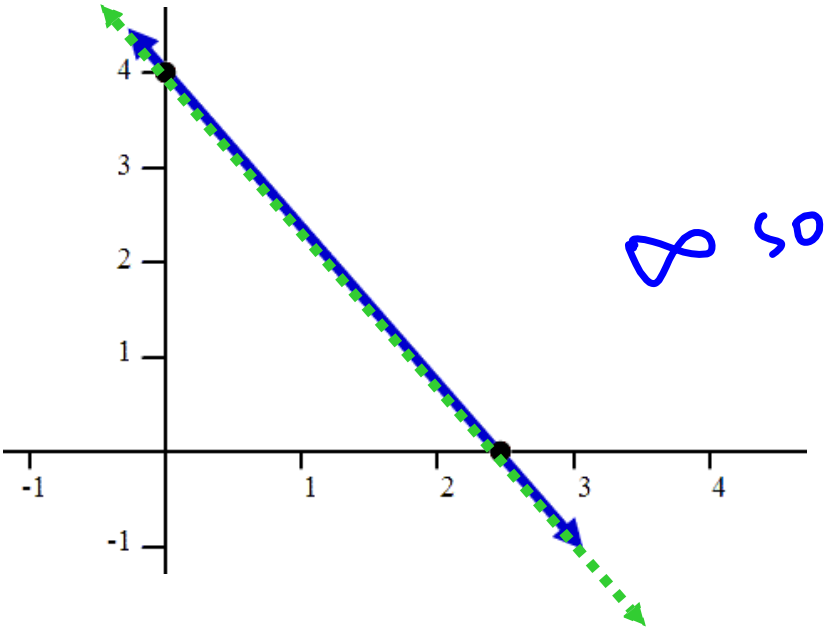
1 sol

How many solutions are there to the system?

$$\frac{2y}{2} = \frac{6x}{2} + \frac{2}{2} \quad y = 3x + 1$$

$$y = 3x + 1$$

How many solutions are there to the system?



∞ sol

How many solutions are there to the system?

$y = 2x + 8$

$y = -2x + 4$

1 sol

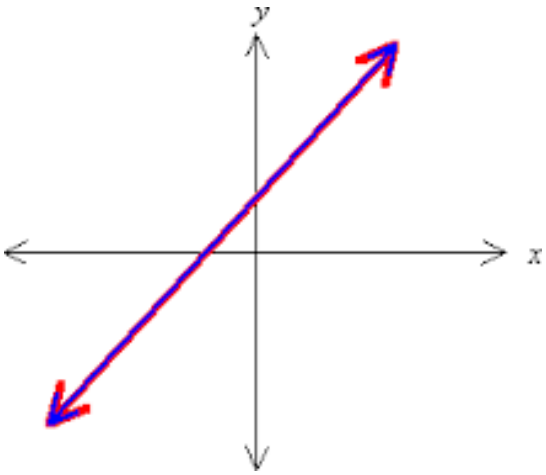
How many solutions are there to the system?

$$2y = -5x - 6$$
$$-2y = 5x + 9$$

$0 = 3$

NO SOL

How many solutions are there to the system?

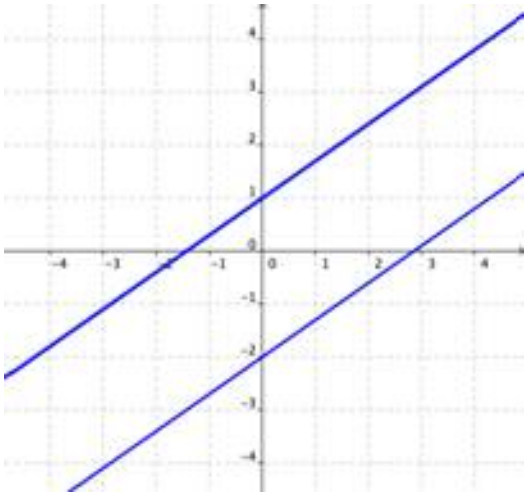


How many solutions are there to the system?

$$8x + 2y = 1$$
$$-8x + 2y = 7$$

$4y = 8$

How many solutions are there to the system?



How many solutions are there to the system?

$$2x + 9y = 7$$

$$7 - 9y = 2x$$

How many solutions are there to the system?

$$18x + 12y = 24$$

$$3x + 2y = 6$$

5.4 hw pg 239-240 #s 1, 2, 3-25 odds, 30, 32

due Wednesday