

Review - Systems of Linear Equations

Date _____ Period _____

Determine which answer choice is a solution to the given system.

$$1) \begin{cases} 3y = -3x - 9 \\ 4x = -3y - 14 \end{cases}$$

A) $(-5, -2)$

B) $(2, -5)$

C) $(-5, 2)$

D) Infinite number of solutions

$$2) \begin{cases} 0 = 3x - 10 - 5y \\ -4y + 10 = -6x \end{cases}$$

A) $(5, 4)$

B) $(4, 5)$

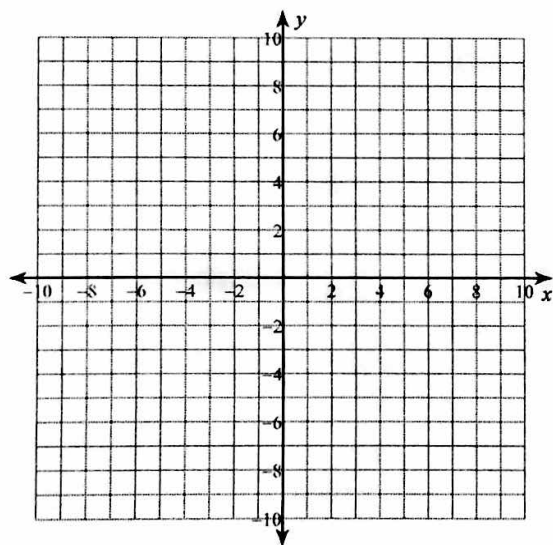
C) $(-3, -4)$

D) $(-5, -5)$

Solve each system by graphing.

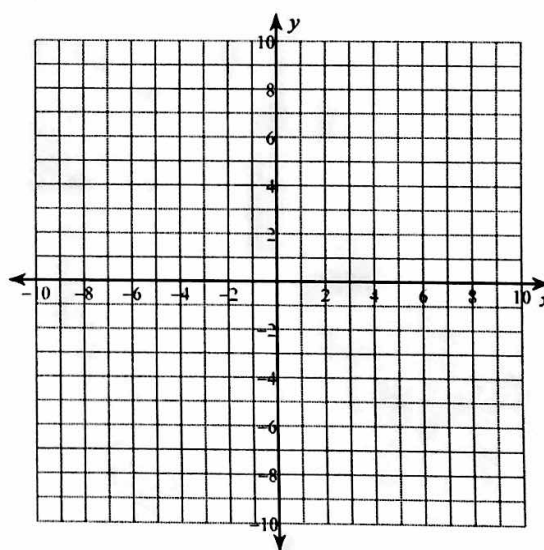
$$3) \begin{cases} y = \frac{2}{9}x + 6 \\ y = -\frac{7}{9}x - 3 \end{cases}$$

$$y = -\frac{7}{9}x - 3$$

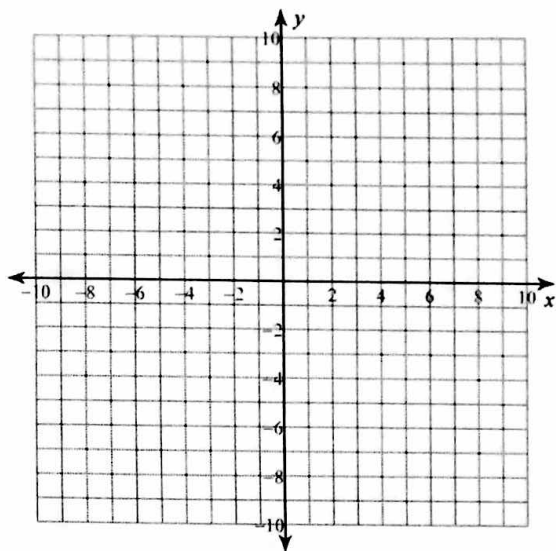


$$4) \begin{cases} y = \frac{6}{7}x - 3 \\ y = -\frac{1}{7}x + 4 \end{cases}$$

$$y = -\frac{1}{7}x + 4$$



$$\begin{aligned} 5) \quad & 14x + 5y = -40 \\ & 3x - 5y = -45 \end{aligned}$$



Solve each system by elimination.

$$\begin{aligned} 6) \quad & 3x - 3y = -12 \\ & -3x + 10y = 5 \end{aligned}$$

$$\begin{aligned} 7) \quad & -3x + 7y = 14 \\ & 7x + 7y = 14 \end{aligned}$$

$$\begin{aligned} 8) \quad & -3x + 8y = -8 \\ & 6x + 7y = -7 \end{aligned}$$

$$\begin{aligned} 9) \quad & -9x - 9y = 18 \\ & -3x + 3y = 18 \end{aligned}$$

Solve each system by substitution.

10) $y = -2x + 18$
 $-8x + 5y = 0$

11) $6x - 3y = 9$
 $y = -3x + 2$

12) $-2x + 4y = 14$
 $x - y = -3$

13) $5x + y = 17$
 $-3x + 3y = -21$

14) The sum of two numbers is 12. Their difference is 4. Find the numbers.

15) Sumalee and Perry each improved their yards by planting hostas and ivy. They bought their supplies from the same store. Sumalee spent \$100 on 5 hostas and 5 pots of ivy. Perry spent \$136 on 5 hostas and 8 pots of ivy. What is the cost of one hosta and the cost of one pot of ivy?

16) Krystal and Natalie each improved their yards by planting grass sod and ornamental grass. They bought their supplies from the same store. Krystal spent \$27 on 3 ft² of grass sod and 7 bunches of ornamental grass. Natalie spent \$24 on 3 ft² of grass sod and 6 bunches of ornamental grass. What is the cost of one ft² of grass sod and the cost of one bunch of ornamental grass?

- 17) Trevon and Stefan are selling flower bulbs for a school fundraiser. Customers can buy bags of windflower bulbs and bags of daffodil bulbs. Trevon sold 10 bags of windflower bulbs and 10 bags of daffodil bulbs for a total of \$250. Stefan sold 8 bags of windflower bulbs and 5 bags of daffodil bulbs for a total of \$140. Find the cost each of one bag of windflower bulbs and one bag of daffodil bulbs.

Simplify.

18) $6(2n + 6) + 4$

Solve each equation.

19) $3 = x - 4x$

20) $-160 = 8(-5 + 2n) - 8$

Find the slope of the line through each pair of points.

21) $(-10, 18), (2, -4)$

22) $(-13, -6), (9, 20)$

Write the slope-intercept form of the equation of each line.

23) $2x + 7y = 42$

24) $5x - 2y = 2$

Answers to Review - Systems of Linear Equations (ID: 1)

- 1) C 2) D 3) $(-9, 4)$ 4) $(7, 3)$
5) $(-5, 6)$ 6) $(-5, -1)$ 7) $(0, 2)$ 8) $(0, -1)$
9) $(-4, 2)$ 10) $(5, 8)$ 11) $(1, -1)$ 12) $(1, 4)$
13) $(4, -3)$ 14) 4 and 8 15) hosta: \$8, pot of ivy: \$12
16) ft² of grass sod: \$2, bunch of ornamental grass: \$3
17) bag of windflower bulbs: \$5, bag of daffodil bulbs: \$20
18) $12n + 40$ 19) $\{-1\}$ 20) $\{-7\}$ 21) $-\frac{11}{6}$
22) $\frac{13}{11}$ 23) $y = -\frac{2}{7}x + 6$ 24) $y = \frac{5}{2}x - 1$