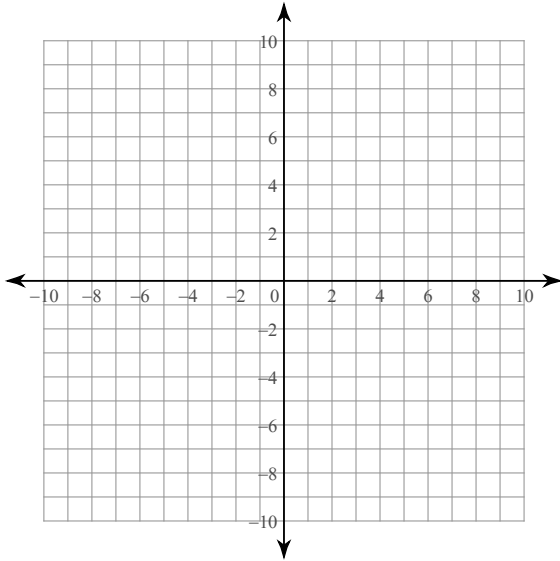


Chapter 14 Review

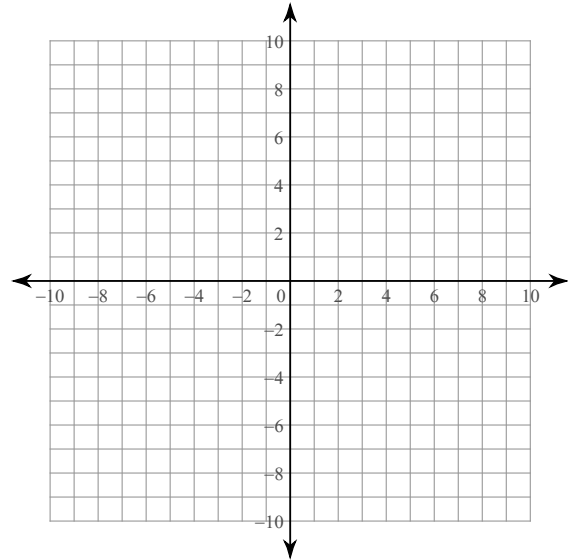
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Solve each system by graphing.

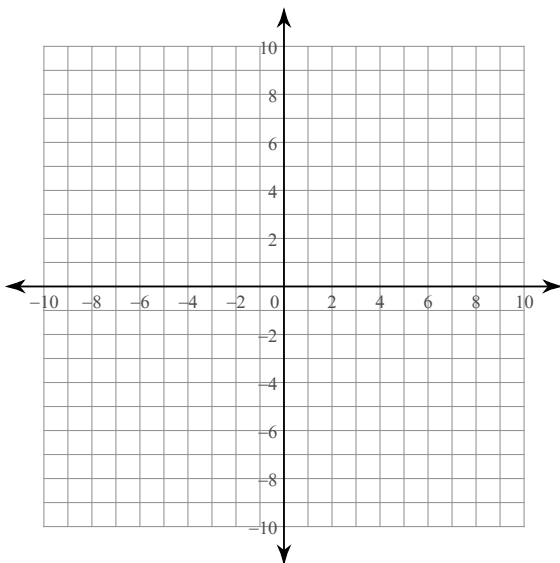
$$1) \begin{aligned} y &= -3x - 2 \\ y &= 2x - 7 \end{aligned}$$



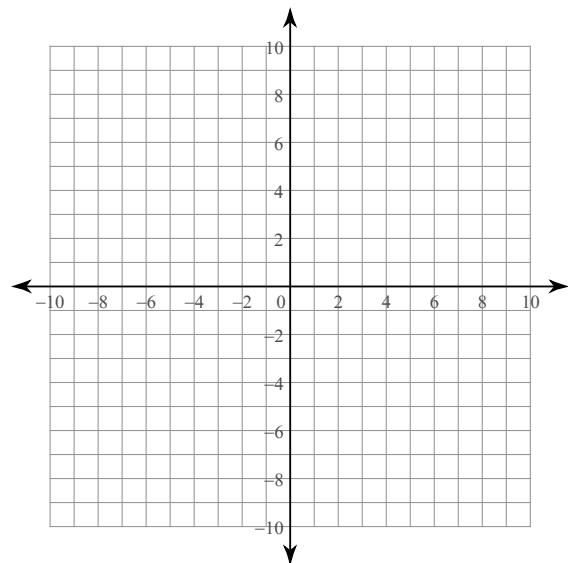
$$2) \begin{aligned} y &= -\frac{1}{5}x + 7 \\ y &= -\frac{13}{5}x - 5 \end{aligned}$$



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

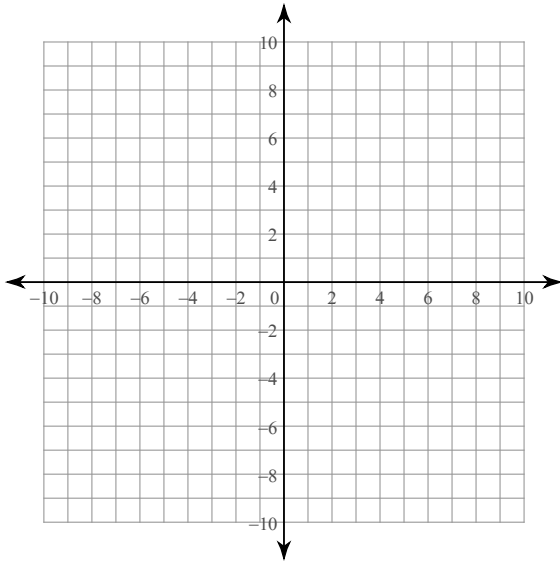


$$4) \begin{aligned} y &= \frac{7}{2}x - 5 \\ y &= \frac{1}{4}x + 8 \end{aligned}$$



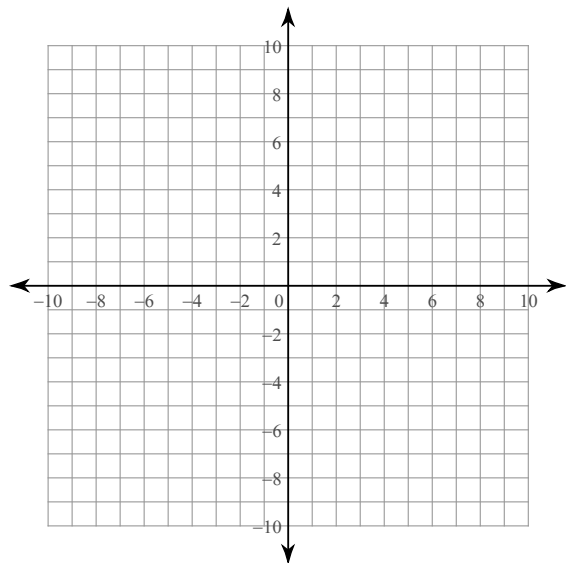
5) $y = 2x + 2$

$y = \frac{1}{3}x + 7$



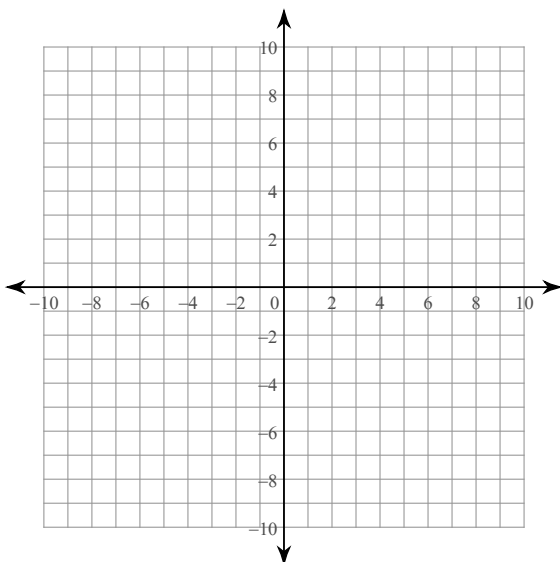
6) $y = \frac{3}{2}x - 4$

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



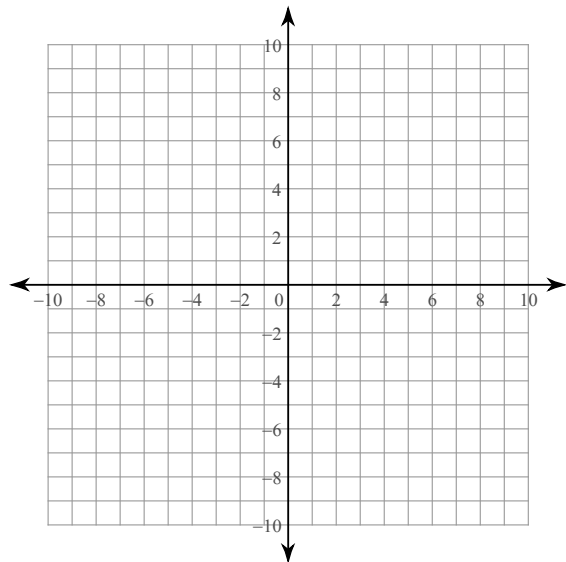
7) $x = -3$

$y = \frac{5}{3}x - 3$



8) $y = -\frac{3}{2}x - 6$

$y = \frac{11}{2}x + 8$



Solve each system by substitution. Show all work.

$$\begin{aligned} 9) \quad y &= -4x + 16 \\ y &= 2x - 8 \end{aligned}$$

$$\begin{aligned} 10) \quad y &= 6x - 16 \\ y &= -4x + 14 \end{aligned}$$

$$\begin{aligned} 11) \quad y &= 5x + 24 \\ y &= -4x - 12 \end{aligned}$$

$$\begin{aligned} 12) \quad y &= -5x + 8 \\ 6x + 2y &= 12 \end{aligned}$$

$$\begin{aligned} 13) \quad 2x + 5y &= -14 \\ y &= 5x + 8 \end{aligned}$$

$$\begin{aligned} 14) \quad y &= -4x - 11 \\ -3x - 5y &= 4 \end{aligned}$$

$$\begin{aligned} 15) \quad x - 2y &= -6 \\ 3x - y &= 2 \end{aligned}$$

$$\begin{aligned} 16) \quad 2x + 2y &= -4 \\ 7x + 8y &= -12 \end{aligned}$$

Solve each system by elimination. Show all work.

$$\begin{aligned} 17) \quad & -9x - 2y = -11 \\ & 10x + 2y = 10 \end{aligned}$$

$$\begin{aligned} 18) \quad & -x + 5y = -7 \\ & -3x - 5y = -21 \end{aligned}$$

$$\begin{aligned} 19) \quad & x + 9y = -15 \\ & x + 7y = -11 \end{aligned}$$

$$\begin{aligned} 20) \quad & -5x + y = -7 \\ & -5x - 3y = 21 \end{aligned}$$

$$\begin{aligned} 21) \quad & -2x + 6y = 2 \\ & 4x - 2y = -4 \end{aligned}$$

$$\begin{aligned} 22) \quad & 12x + 2y = -2 \\ & -4x - 3y = 3 \end{aligned}$$

$$\begin{aligned} 23) \quad & -6x - 9y = -9 \\ & -4x + 4y = -16 \end{aligned}$$

$$\begin{aligned} 24) \quad & -4x - 8y = -16 \\ & 6x + 10y = 10 \end{aligned}$$

For each problem, write a system of equations and answer the question. Show all work.

- 25) Shanice and Scott each improved their yards by planting hostas and ornamental grass. They bought their supplies from the same store. Shanice spent \$143 on 7 hostas and 6 bunches of ornamental grass. Scott spent \$176 on 8 hostas and 8 bunches of ornamental grass. What is the cost of one hosta and the cost of one bunch of ornamental grass?
- 26) Mary and Alberto are selling cheesecakes for a school fundraiser. Customers can buy New York style cheesecakes and strawberry cheesecakes. Mary sold 1 New York style cheesecake and 6 strawberry cheesecakes for a total of \$113. Alberto sold 2 New York style cheesecakes and 1 strawberry cheesecake for a total of \$39. Find the cost each of one New York style cheesecake and one strawberry cheesecake.
- 27) Nicole's school is selling tickets to the annual talent show. On the first day of ticket sales the school sold 9 senior citizen tickets and 14 child tickets for a total of \$210. The school took in \$250 on the second day by selling 14 senior citizen tickets and 9 child tickets. What is the price each of one senior citizen ticket and one child ticket?
- 28) The senior classes at High School A and High School B planned separate trips to the state fair. The senior class at High School A rented and filled 5 vans and 10 buses with 440 students. High School B rented and filled 8 vans and 2 buses with 172 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.
- 29) Find the value of two numbers if their sum is 21 and their difference is 1.

Answers to Chapter 14 Review

- | | | | |
|--|----------------------|---------------|----------------|
| 1) $(1, -5)$ | 2) $(-5, 8)$ | 3) $(-4, 5)$ | 4) $(4, 9)$ |
| 5) $(3, 8)$ | 6) No solution | 7) $(-3, -8)$ | 8) $(-2, -3)$ |
| 9) $(4, 0)$ | 10) $(3, 2)$ | 11) $(-4, 4)$ | 12) $(1, 3)$ |
| 13) $(-2, -2)$ | 14) $(-3, 1)$ | 15) $(2, 4)$ | 16) $(-4, 2)$ |
| 17) $(-1, 10)$ | 18) $(7, 0)$ | 19) $(3, -2)$ | 20) $(0, -7)$ |
| 21) $(-1, 0)$ | 22) $(0, -1)$ | 23) $(3, -1)$ | 24) $(-10, 7)$ |
| 25) hosta: \$11, bunch of ornamental grass: \$11 | | | |
| 26) New York style cheesecake: \$11, strawberry cheesecake: \$17 | | | |
| 27) senior citizen ticket: \$14, child ticket: \$6 | 28) Van: 12, Bus: 38 | 29) 10 and 11 | |

- 30) A class used cars and vans to go on a field trip because all of the buses were already in use. They used 12 vehicles to go on the trip. Each car holds 3 students and each van holds 9 students. If 66 students went on the trip then how many of each type of vehicle did the class use?
- 31) Anjali's Printing Inc. has two type of printing presses: Model A and Model B. Model A can print 80 books per day and Model B can print 60 books per day. Altogether Anjali has 8 printing presses. If she can print 580 books in a day then how many of each press does she have?
- 32) There are 22 animals in the barn. Some are geese and some are oxen. There are 76 legs in all. How many of each animal are there?
- 33) Jenny bought 8 writing utensils for a total of \$29. Pens cost \$4 and pencils cost \$3. How many of each writing utensil did she buy?
- 34) Lea's Custom Kitchen Supplies sells handmade forks and spoons. It costs the store \$2 to buy the supplies to make a fork and \$2 to buy the supplies to make a spoon. The store sells forks for \$4 and spoons for \$6. Last April Lea's Custom Kitchen Supplies spent \$74 on materials for forks and spoons. They sold the finished products for a total of \$188. How many forks and how many spoons did they make last April?

Answers to

30) 7 cars and 5 vans

31) 5 of Model A and 3 of Model B

32) 6 geese and 16 oxen

33) 5 pens and 3 pencils

34) 17 forks and 20 spoons