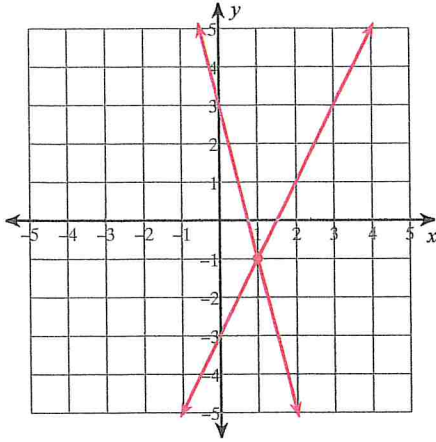


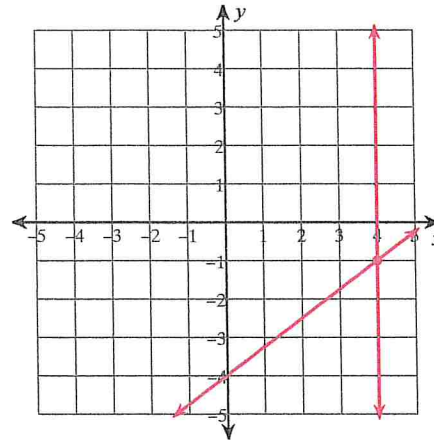
Systems Review

Solve each system by graphing.

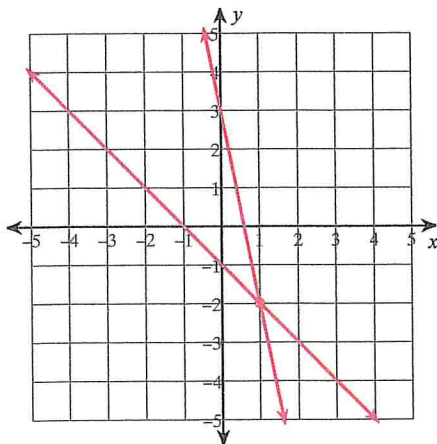
$$1) \begin{aligned} y &= 2x - 3 \\ y &= -4x + 3 \end{aligned}$$

 $(1, -1)$

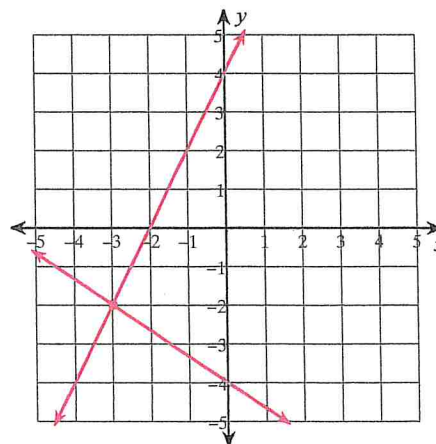
$$2) \begin{aligned} x &= 4 \\ y &= \frac{3}{4}x - 4 \end{aligned}$$

 $(4, -1)$

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

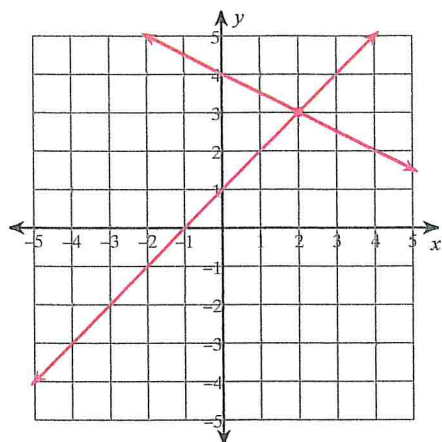
 $(1, -2)$

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

 $(-3, -2)$

$$5) y = x + 1$$

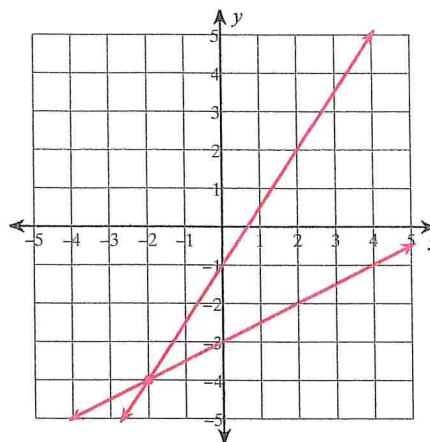
$$y = -\frac{1}{2}x + 4$$



(2, 3)

$$6) y = \frac{1}{2}x - 3$$

$$y = \frac{3}{2}x - 1$$



(-2, -4)

Solve each system by substitution.

$$7) -7x - 8y = 3$$

$$x + 7y = 23$$

(-5, 4)

$$8) 5x - 3y = -6$$

$$-8x + y = 2$$

(0, 2)

$$9) 2x + 2y = 24$$

$$x + y = 12$$

Infinite number of solutions

$$10) 7x + 2y = 4$$

$$x - 2y = 12$$

(2, -5)

$$11) x + 4y = -8$$

$$-3x - 12y = -1$$

No solution

$$12) -3x + 7y = -12$$

$$x + 7y = -24$$

(-3, -3)

13) $-7x + y = 18$
 $-5x + 8y = -9$
 $(-3, -3)$

14) $-3x - y = 10$
 $x + 2y = 5$
 $(-5, 5)$

15) $-24x - 3y = 18$
 $8x + y = -6$

Infinite number of solutions

16) $-2x - y = 3$
 $2x + y = -3$

Infinite number of solutions

- 17) Kathryn and Imani are selling cheesecakes for a school fundraiser. Customers can buy New York style cheesecakes and apple cheesecakes. Kathryn sold 5 New York style cheesecakes and 8 apple cheesecakes for a total of \$150. Imani sold 10 New York style cheesecakes and 4 apple cheesecakes for a total of \$120. Find the cost each of one New York style cheesecake and one apple cheesecake.

New York style cheesecake: \$6, apple cheesecake: \$15

- 18) Bill and Amanda are selling flower bulbs for a school fundraiser. Customers can buy packages of tulip bulbs and packages of crocus bulbs. Bill sold 14 packages of tulip bulbs and 12 packages of crocus bulbs for a total of \$318. Amanda sold 13 packages of tulip bulbs and 1 package of crocus bulbs for a total of \$133. What is the cost each of one package of tulips bulbs and one package of crocus bulbs?

package of tulips bulbs: \$9, package of crocus bulbs: \$16

- 19) Paul and Norachai each improved their yards by planting daylilies and shrubs. They bought their supplies from the same store. Paul spent \$71 on 9 daylilies and 4 shrubs. Norachai spent \$25 on 1 daylily and 2 shrubs. Find the cost of one daylily and the cost of one shrub.

daylily: \$3, shrub: \$11

- 20) Willie and Ashley are selling fruit for a school fundraiser. Customers can buy small boxes of grapefruit and large boxes of grapefruit. Willie sold 10 small boxes of grapefruit and 12 large boxes of grapefruit for a total of \$224. Ashley sold 13 small boxes of grapefruit and 6 large boxes of grapefruit for a total of \$176. Find the cost each of one small box of grapefruit and one large box of grapefruit.

small box of grapefruit: \$8, large box of grapefruit: \$12

21) The sum of the digits of a certain two-digit number is 10. When you reverse its digits you increase the number by 18. What is the number?

46

22) A plane traveled 700 miles to Perth and back. The trip there was with the wind. It took 7 hours. The trip back was into the wind. The trip back took 14 hours. Find the speed of the plane in still air and the speed of the wind.

plane: 75 mph, wind: 25 mph

23) Daniel's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 4 adult tickets and 1 child ticket for a total of \$27. The school took in \$18 on the second day by selling 1 adult ticket and 4 child tickets. Find the price of an adult ticket and the price of a child ticket.

adult ticket: \$6, child ticket: \$3

24) Alberto's school is selling tickets to a play. On the first day of ticket sales the school sold 7 senior citizen tickets and 9 student tickets for a total of \$154. The school took in \$126 on the second day by selling 14 senior citizen tickets and 5 student tickets. What is the price each of one senior citizen ticket and one student ticket?

senior citizen ticket: \$4, student ticket: \$14

25) Kali and Bill are selling wrapping paper for a school fundraiser. Customers can buy rolls of plain wrapping paper and rolls of shiny wrapping paper. Kali sold 2 rolls of plain wrapping paper and 5 rolls of shiny wrapping paper for a total of \$75. Bill sold 4 rolls of plain wrapping paper and 3 rolls of shiny wrapping paper for a total of \$59. What is the cost each of one roll of plain wrapping paper and one roll of shiny wrapping paper?

roll of plain wrapping paper: \$5, roll of shiny wrapping paper: \$13

26) The indoor climbing gym is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 7 vans and 7 buses with 462 students. High School B rented and filled 8 vans and 14 buses with 876 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.

Van: 8, Bus: 58