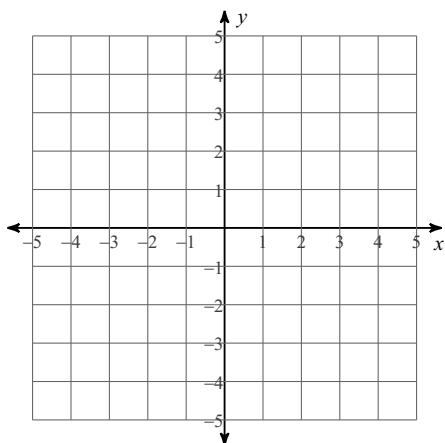


Unit 1 Review Sheet

Solve each system by graphing.

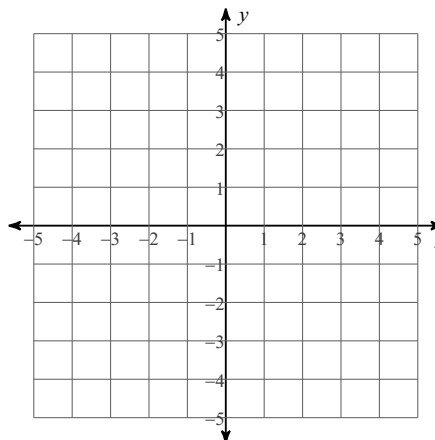
$$1) \ y = -\frac{1}{3}x - 4$$

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



$$2) \ y = x + 3$$

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



Solve each system by substitution.

$$3) \ 2x + y = 12$$

$$-4x - 8y = -12$$

$$4) \ -5x + 8y = 11$$

$$x + y = 3$$

$$5) \ 9x - 3y = 4$$

$$-3x + y = 0$$

$$6) \ -2x - 3y = 15$$

$$x + 3y = -12$$

Solve each system by elimination.

$$7) \ 8x - 2y = 18$$

$$2x - 8y = 12$$

$$8) \ -4 = -14x - 10y$$

$$5y + 7x = 2$$

$$9) \ -7x + 6y = -6$$

$$10x - 4y = 4$$

$$10) \ -5x - 9y = -3$$

$$-2x - 2y = 2$$

$$11) \ 5x - 2y + 5z = -17$$

$$4x + 2y - 6z = 0$$

$$6x - 5y - 2z = -15$$

$$12) \ -x - 6y + 2z = -6$$

$$-5x - 6y + 4z = 6$$

$$x + 5y + z = 21$$

$$13) \ 2r - 3s - 3t = 13$$

$$-5r - 6s + 2t = -19$$

$$3r - 6s + 3t = 21$$

$$14) \ -a - 2b + 3c = -15$$

$$-4a + 2b + 5c = -26$$

$$2a - 3b - c = 6$$

Solve each system of equations.

15) $x^2 - x + 15y + 15 = 0$
 $x - 3y = 4$

16) $x^2 + 2y^2 + 11x + y - 81 = 0$
 $-x + y - 3 = 0$

17) Amy and Ashley are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Amy sold 13 small boxes of oranges and 3 large boxes of oranges for a total of \$115. Ashley sold 3 small boxes of oranges and 9 large boxes of oranges for a total of \$93. Find the cost each of one small box of oranges and one large box of oranges.

18) A plane traveled 672 miles to Madrid 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.

19) Jaidee's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 8 adult tickets and 9 child tickets for a total of \$132. The school took in \$180 on the second day by selling 14 adult tickets and 3 child tickets. What is the price each of one adult ticket and one child ticket?

20) A boat traveled 96 miles downstream and back. The trip downstream took 4 hours. The trip back took 12 hours. What is the speed of the boat in still water? What is the speed of the current?

21) You are going to make and sell bread. A loaf of Kugelhopf bread is made with 4 cups of flour and 1 cup of sugar. A loaf of Irish soda bread is made with 2 cups of flour and 1/4 cup of sugar. You will make \$1.50 on each loaf of Irish soda bread and \$4 on each loaf of Kugelhopf bread. You have 16 cups of flour and 3 cups of sugar. How many loaves of each type should you make to maximize profit?

