

**Directions:** Turn this Study Guide in on the day of your quiz to receive +5 EXTRA CREDIT on the quiz.**Instructions:** Solve the system of equations by using substitution.

1)  $y = 6x - 11$

$-2x - 3y = -7$

$2y + 3x = 20$

$y = x + 5$

$2(x + 5) + 3x = 20$

$2x + 10 + 3x = 20$

$y = (2) + 5$

$5x + 10 = 20$

$y = 7$

$-10 \quad -10$

$5x = 10$

$\div 5 \quad \div 5$

$(2, 7)$

$x = 2$

2)  $2x - 3y = -1$

$y = x - 1$

3)  $y = -3x + 5$

$5x - 4y = -3$

4)  $-3x - 3y = 3$

$y = -5x - 17$

5)  $-7x - 2y = -13$

$x = 2y + 11$

Graph the following systems of equations to find the solution (using intercepts or writing in slope-intercept form). **Circle the solution and write it as an ordered pair. If it is a special solution, describe the solution(s).**

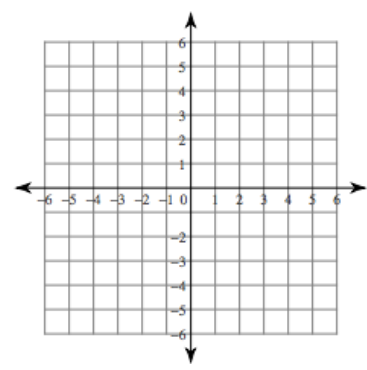
Graph the following linear equation using slope and y-intercept.

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

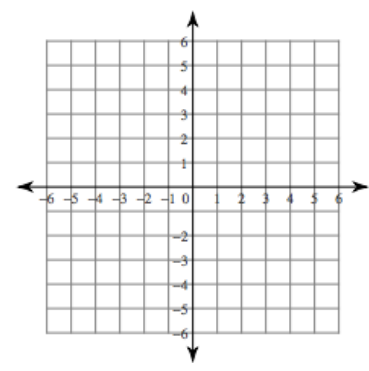
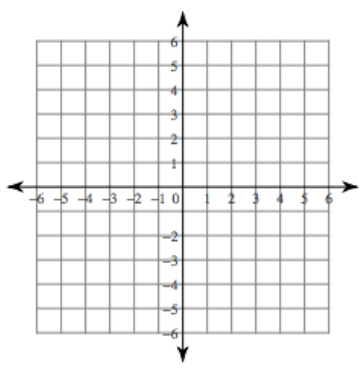
**Steps**

- 1) Find the slope and y-intercept.  
 $m = \frac{2}{3}$     $b = -1$
- 2) Plot the y-intercept.
- 3) Plot the slope.  
 $m = \frac{2}{3}$  or  $m = \frac{-2}{-3}$
- 4) Draw line through points.

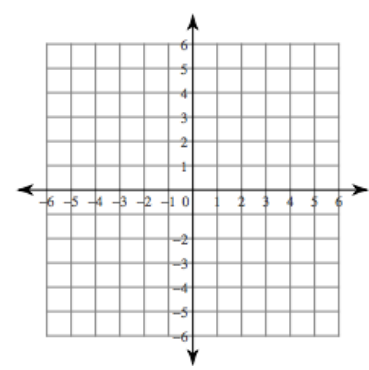
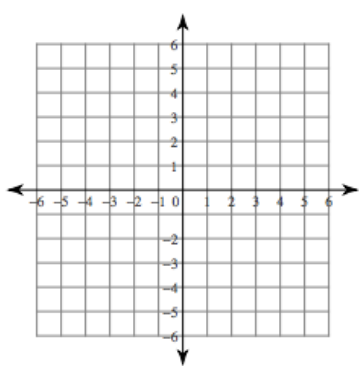
1)  $y = -3x + 7$        $y = 2x - 3$

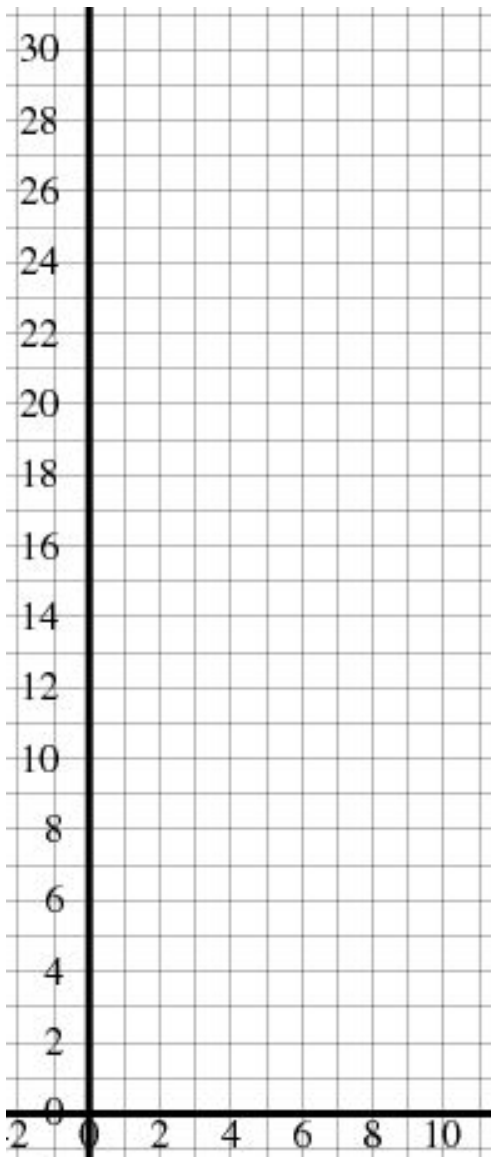


2)  $x + y = 4$        $2x + 2y = 10$       3)  $x + 3y = 6$        $x - 3y = 6$



4)  $y = -4x + 5$        $y = 3x - 9$       5)  $y = 4x - 3$        $2y - 8x = -6$





1) Ms. Draper has a Starbucks gift card with \$20, and every time she buys a tall coffee, her card balance decreases by \$3. Ms. Lane has a Starbucks gift card with \$30, but she usually buys venti coffees, which each cost \$5. *After how many coffees would the balance on Ms. Draper's and Ms. Lane's cards be the same?* Make tables and graphs to answer the question. Then, write equations for Ms. Draper's and Ms. Lane's gift card balances. Define  $x$  and  $y$ . Check your answer.

*Ms. Draper's Gift Card*

x:	y:
0	

Ms. Draper's Gift Card

*Ms. Lane's Gift Card*

x:	y:
0	

Ms. Lane's Gift Card

2) Briana and Ashley each take a cab ride. Briana takes a cab whose company charges an initial fee of \$1.50 and then \$2 per mile. Ashley takes a cab whose company charges an initial fee of \$2 and then \$1.75 per mile. *At what point in their trips would their taximeters have shown the same cost?* Make tables and graphs to answer the question. Then, write equations for Briana's and Ashley's cab costs. Define  $x$  and  $y$ . Check your answer.

*Briana's Cab*

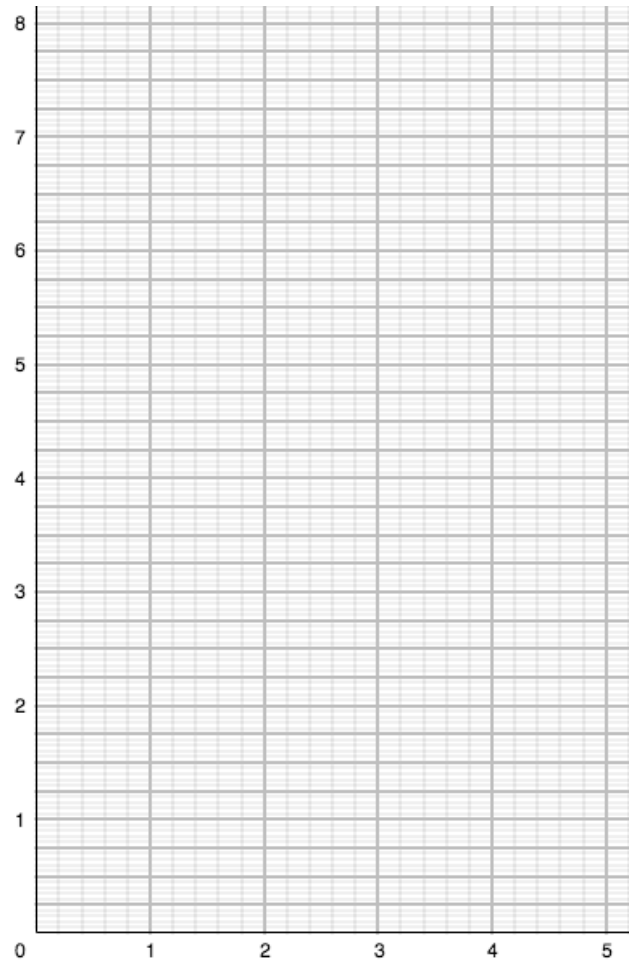
X:	Y:
0	

Briana's Cab Equation

*Ashley's Cab*

X:	Y:
0	

Ashley's Cab Equation



Define  $x$  &  $y$ . Write two equations. Solve the system by substitution. Answer in a complete sentence.

3) The director of a marching band needs to order 35 new uniforms for both boys and girls. There are usually 5 more girls than twice the number of boys in the band. How many orders of each type should she buy?

4) At the barber shop, Joe and Jerry do a total of 95 haircuts each week. If Joe does 16 fewer than twice as many as Jerry, how many haircuts does each person do each week?

5) At Elisa's Printing Company there are two kinds of printing presses: Model A and Model B. Model A can print 70 books per day and Model B can print 55 books per day. The company owns 14 printing presses and this allows them to print 905 books per day. How many of each type of press do they have?

6) You are planning a large graduation party, and you plan to offer a beef meal and a chicken meal. The chicken dish costs \$5 and the beef dish costs \$7. There will be 250 people who eat at the party, and the total cost of the food is \$1500. How many chicken meals will there be? How many beef meals?