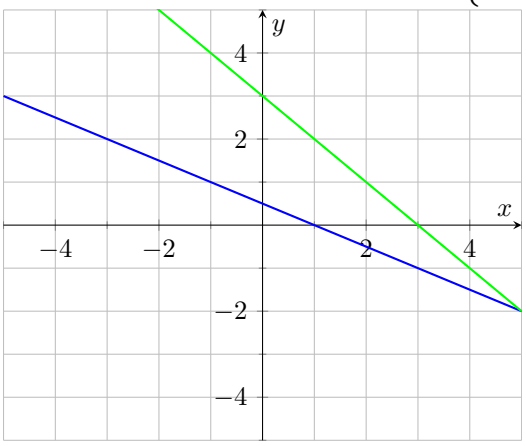
1. Solve the system of linear equations $\left\{ \begin{array}{l} -x - 1y = -3 \\ x + 2y = 1 \end{array} \right\}$ by using the graph below.



A. $(5, -2)$.

B. $(2, -5)$.

C. $(7, 0)$.

D. $(8, 1)$.

E. $(6, -1)$.

F. $(4, -3)$.

2. Choose the ordered pair below which is a solution to the system of linear equations $\left\{ \begin{array}{l} 3x - y = -3 \\ 6x - y = -3 \end{array} \right\}$

A. $(2, 5)$.

B. $(0, 3)$.

C. $(-1, 2)$.

D. $(1, 4)$.

E. $(-2, 1)$.

F. $(3, 6)$.

3. Use the slope-intercept form of each line to determine the number of solutions of the system $\left\{ \begin{array}{l} -\frac{3}{2}x + y = -3 \\ 5x - 2y = 4 \end{array} \right\}$; then classify each system as a consistent system of independent equations, an inconsistent system, or a consistent system of dependent equations.

A. The system has no solutions. Therefore, it is an inconsistent system of equations.

B. The system has two solutions. Therefore, it is a consistent system of independent equations.

C. The system has one solution. Therefore, it is an inconsistent system of dependent equations.

D. The system has infinitely many solutions. Therefore, it is a consistent system of dependent equations.

E. The system has two solutions. Therefore, it is a inconsistent system of dependent equations.

F. The system has infinitely many solutions. Therefore, it is an inconsistent system of dependent equations.

G. The system has one solution. Therefore, it is a consistent system of independent equations.

H. The system has no solutions. Therefore, it is a consistent system of independent equations.

4. Use the table

x	$2x+1$	$3x+2$
-5	-9	-13
-4.5	-8	-11.5
-4	-7	-10
-3.5	-6	-8.5
-3	-5	-7
-2.5	-4	-5.5
-2	-3	-4
-1.5	-2	-2.5
-1	-1	-1
-0.5	0	0.5
0	1	2
0.5	2	3.5
1	3	5
1.5	4	6.5
2	5	8
2.5	6	9.5
3	7	11
3.5	8	12.5
4	9	14
4.5	10	15.5
5	11	17

to solve the linear system of equations $\left\{ \begin{array}{l} y = 2x+1 \\ y = 3x+2 \end{array} \right\}$.

A. $(1, 1)$

B. $(-5, -5)$

C. $(-1, -1)$

D. $(3, 3)$

E. $(-4, -4)$

F. $(0, 0)$

G. $(-3, -3)$

H. $(-2, -2)$

5. Choose the ordered pair below which is a solution to the system of linear equations $\left\{ \begin{array}{l} -3x + 7y = 2 \\ x - 2y = -2 \end{array} \right\}$

A. $(-12, -6)$.

B. $(-8, -2)$.

C. $(-10, -4)$.

D. $(-11, -5)$.

E. $(-13, -7)$.

F. $(-7, -1)$.

6. Use the slope-intercept form of each line to determine the number of solutions of the system $\left\{ \begin{array}{l} y = -2x + 4 \\ y = -2x - 2 \end{array} \right\}$; then classify each system as a consistent system of independent equations, an inconsistent system, or a consistent system of dependent equations.

A. The system has one solution. Therefore, it is a consistent system of independent equations.

B. The system has infinitely many solutions. Therefore, it is an inconsistent system of dependent equations.

C. The system has two solutions. Therefore, it is a consistent system of independent equations.

D. The system has two solutions. Therefore, it is a inconsistent system of dependent equations.

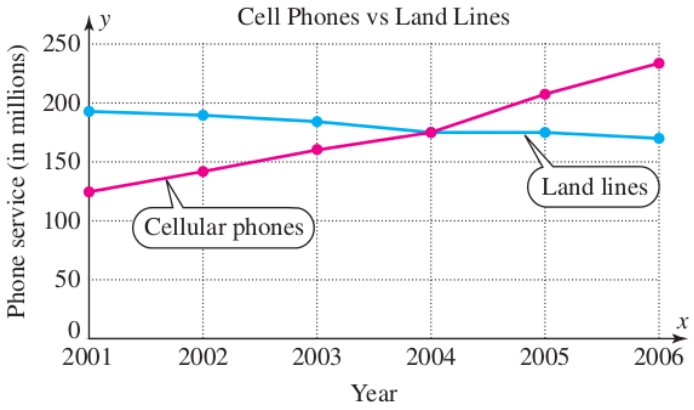
E. The system has no solutions. Therefore, it is an inconsistent system of equations.

F. The system has no solutions. Therefore, it is a consistent system of independent equations.

G. The system has infinitely many solutions. Therefore, it is a consistent system of dependent equations.

H. The system has one solution. Therefore, it is an inconsistent system of dependent equations.

7. The number of cellular phone subscribers and the number of land lines in the United States from 2001 to 2006 are displayed in the accompanying graph. Determine the point of intersection of these two line graphs. Then interpret the meaning of the x- and y-coordinates of this point.



A. The slope of the line representing landline use is about 20 million users/year and the slope of the line representing the cellular phone use is about -5 million users/year. This means that companies providing landline service see about 20 million new customers per year, whereas cell phone use is decreasing by about 5 million users per year.

B. The y-intercepts are about 200 million cellular phone users and a little under 125 million land line users in 2001.

C. The point of intersection is about $(2004, 175)$. This means that in 2004, the amount of cellular phone service equalled the amount of landline service at about 175 million users. This is the point where the numbers of cell phone users surpassed the number of landline users.

D. The y-intercepts are about 125 million cellular phone users and a little under 200 million land line users in 2001.

E. The point of intersection is about $(175, 2004)$. This means that in 2004, the number of cell phone users will equal the number of landline users in about 175 years.

F. The point of intersection is about $(2004, 175)$. This means that in 2004, the amount of landline service equalled the amount of cellular phone service at about 175 million users. This is the point where the numbers of cell phone fell behind the number of landline users.

G. The point of intersection is about $(175, 2004)$. This means that in 2004, the number of landline users will equal the number of cell phone users in about 175 years.

H. The slope of the line representing cellular phone use is about 20 million users/year and the slope of the line representing the landline use is about -5 million users/year. This means that cellphone companies see about 20 million new customers per year, whereas landline use is decreasing by about 5 million users per year.

8. Use the table below for the system of two linear equations, $y_1 = m_1x + b_1$ and $y_2 = m_2x + b_2$ to classify the system as a consistent system of independent equations, an inconsistent system, or a consistent system of dependent equations.

x	y_1	y_2
-5	-7	-8
-4.5	-6.5	-7
-4	-6	-6
-3.5	-5.5	-5
-3	-5	-4
-2.5	-4.5	-3
-2	-4	-2
-1.5	-3.5	-1
-1	-3	0
-0.5	-2.5	1
0	-2	2
0.5	-1.5	3
1	-1	4
1.5	-0.5	5
2	0	6
2.5	0.5	7
3	1	8
3.5	1.5	9
4	2	10
4.5	2.5	11
5	3	12

A. The system has infinitely many solutions. Therefore, it is a consistent system of dependent equations.

B. The system has no solutions. Therefore, it is a consistent system of independent equations.

C. The system has infinitely many solutions. Therefore, it is an inconsistent system of dependent equations.

D. The system has one solution. Therefore, it is an inconsistent system of dependent equations.

E. The system has two solutions. Therefore, it is a inconsistent system of dependent equations.

F. The system has two solutions. Therefore, it is a consistent system of independent equations.

G. The system has one solution. Therefore, it is a consistent system of independent equations.

H. The system has no solutions. Therefore, it is an inconsistent system of equations.