

Systems of Equations Quiz Review

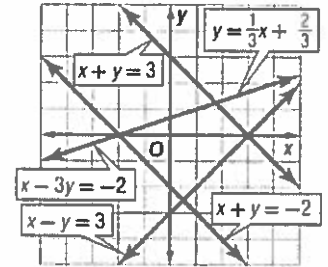
Using the graph at right, decide if the following systems of equations are inconsistent or consistent. If it's consistent, decide if the system is independent or dependent.

1. $x + y = 3$
 $x - y = 3$
 consistent, independent

3. $x - 3y = -2$
 $y = \frac{1}{3}x + \frac{2}{3}$
 consistent dependent

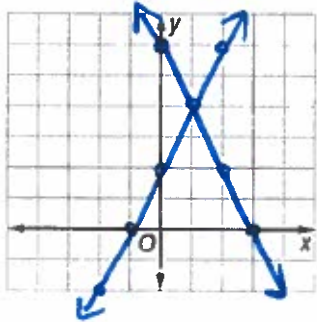
2. $x + y = 3$
 $x + y = -2$
 inconsistent

4. $x + y = 3$
 $x - 3y = -2$
 consistent independent

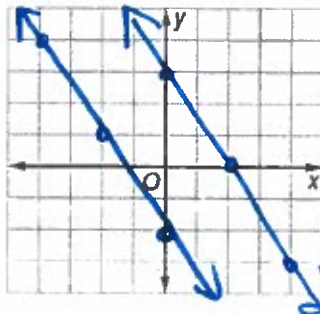


Graph the following systems of equations. State how many solutions each system. Then, if it has only one, name it.

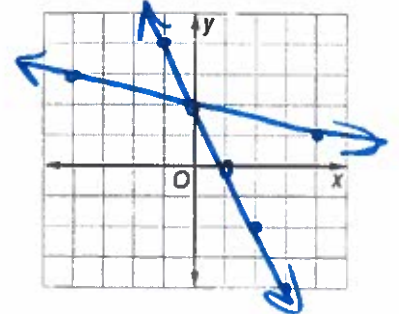
5. $y = -2x + 6$
 $y = 2x + 2$
 one solution
 (1, 4)



6. $y = -\frac{3}{2}x + 3$
 $y = -\frac{3}{2}x - 2$
 no solutions



7. $y = -2x + 2$
 $y = -\frac{1}{4}x + 2$
 one solution
 (0, 2)



Solve the following systems of equations using substitution. SHOW ALL STEPS, and be sure your final answer is written as a coordinate.

8. $x = 2y$
 $y = x - 2$
 #1 $x = 4$
 $y = 2$
 #2 $x = 2(x - 2)$
 $x = 2x - 4$
 $-x = -4$
 $x = 4$
 Final answer: $(4, 2)$

9. $y = -4x$
 $2y + x = -7$
 $2(-4x) + x = -7$
 $-8x + x = -7$
 $-7x = -7$
 $x = 1$
 $y = -4(1) = -4$
 Final answer: $(1, -4)$

10. $x = 5y - 6$
 $x + 2y = 8$
 $5y - 6 + 2y = 8$
 $7y - 6 = 8$
 $7y = 14$
 $y = 2$
 $x = 5(2) - 6 = 10 - 6 = 4$
 Final answer: $(4, 2)$

Solve the following systems of equations using elimination. SHOW ALL STEPS, and be sure your final answer is written as a coordinate.

11. $-3x - 4y = -1$
 $3x - y = -4$
 $-5y = -5$
 $y = 1$
 $3x - 1 = -4$
 $3x = -3$
 $x = -1$
 Final answer: $(-1, 1)$

12. $3x + y = 4$
 $2x - y = 6$
 $5x + 0y = 10$
 $5x = 10$
 $x = 2$
 $2(2) - y = 6$
 $-4 = 6 - y$
 $-10 = -y$
 $y = -10$
 Final answer: $(2, -10)$

13. $2x - 2y = -9$
 $-2x - y = -6$
 $-y = -3$
 $y = 3$
 $2x - 3 = -9$
 $2x = -6$
 $x = -3$
 Final answer: $(-3, 3)$