Name: Date:
Instructor: Section:

Practice Set 4.1

Use the choices below to fill in each blank.

one	consistent	dependent	the same	slopes
two	inconsistent	parallel	intersecting	y-intercepts

1. A system of equations that has an infinite number of solutions is called a(n) _____ system of equations and the graph of the equations represents _____ line(s).

2. A system of equations that has no solution is called a(n) _____ system of equations and the graph of the two equations represents _____ line(s).

3. A system of equation that has one solution is called a(n) _____ system of equations and the graph of the two equations represents _____ line(s).

4. To determine, without graphing, whether a system of equations is consistent, inconsistent, or dependent, compare the _____ and _____.

5. When solving a system of equations by addition, multiply one or both equations by (a) constant(s) so that when the equations are added the sum will contain _____ variable.

Determine which of the ordered pairs, if any, satisfy the system of linear equations.

6. $y = 2x + 1$
$y = 3x$
a) (1, 3)
b) (–1, –3)
6._____

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7. $3x + 2y = 0$
$2x + y = 1$
a) (2, 3)
b) (2, –3)
7._____

8. $3x - 12y = 30$
$y = \frac{x}{4} - \frac{5}{2}$
a) (10, 0)
b) (–14, –6)
8._____

Without graphing the equations, state whether the system of equations is consistent, inconsistent, or dependent. Also, indicate whether the system has exactly one solution, no solution, or an infinite number of solutions.

9. $-5x + 7y = 9$
$y = -\frac{4}{3}x + \frac{10}{3}$
9._____

10. $5x + 3y = 15$
$\frac{x}{3} + \frac{y}{5} = 1$
10._____

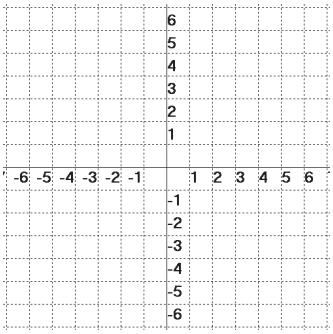
11. $4x + 6y = -12$
$y = -\frac{2}{3}x - \frac{5}{2}$
11._____

12. $4x - 4y = 1$
$\frac{x}{2} - \frac{y}{2} = 1$
12._____

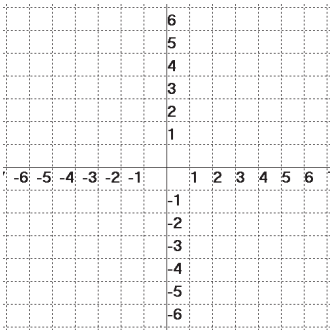
Practice Set 4.1

Determine the solution to each system of equations graphically.

13. $y = x + 2$
$y = -x - 6$



14. $2x + 3y = 9$
$2x - y = 5$



13._____

14._____

Find the solution to each system of equations by substitution.

15. $2x - 3y = -6$
$y = 2x - 2$

16. $y = 3x - 4$
$y = 2x + 3$

15._____

16._____

Find the solution to each system of equations using the addition method.

17. $x + y = 7$
$x - y = -3$

18. $4x + 3y = 11$
$3x + 4y = 3$

17._____

18._____

19. $\frac{x}{5} + \frac{y}{2} = 1$
$y = -\frac{2}{5}x + 2$

20. $\frac{1}{3}x + \frac{1}{2}y = 4$
$\frac{3}{5}x - y = -\frac{2}{5}$

19._____

20._____

21. $0.25x + 0.10y = 1.50$
$0.30x + 0.45y = 3.45$

22. $2x - 5y = 11$
$x - \frac{5}{2}y = 7$

21._____

22._____

Challenge

23. $\frac{x+3}{3} - \frac{y+4}{5} = 1$
$\frac{x+y}{2} = 6 + \frac{x-y}{3}$

23._____

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