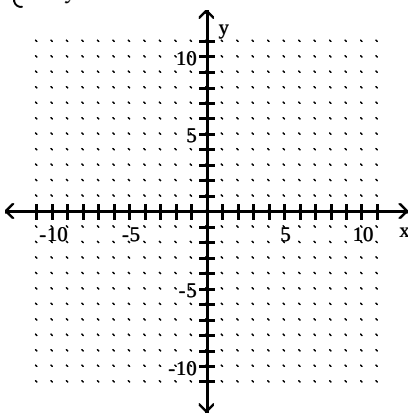
Math 084 Spring 2014 Quiz 7 Preparation sections sections 4.1 & 4.2 v02
Dressler

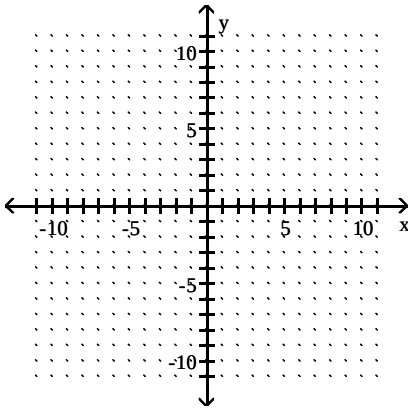
Name_____

Solve the system by graphing. If there is no solution or an infinite number of solutions, so state. Use set notation to express the solution set.

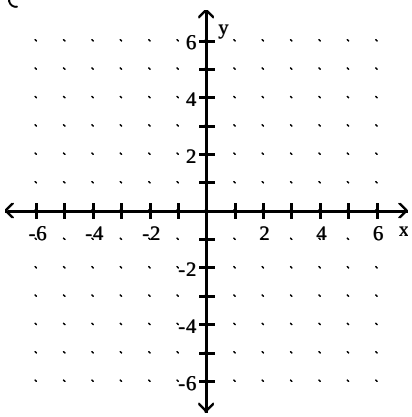
1) $\begin{cases} x + y = 2 \\ x - y = 6 \end{cases}$



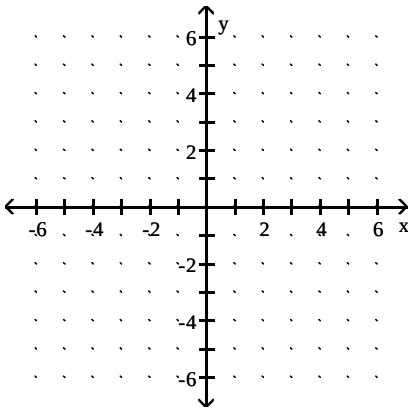
2) $\begin{cases} x + y = 4 \\ x - y = -2 \end{cases}$



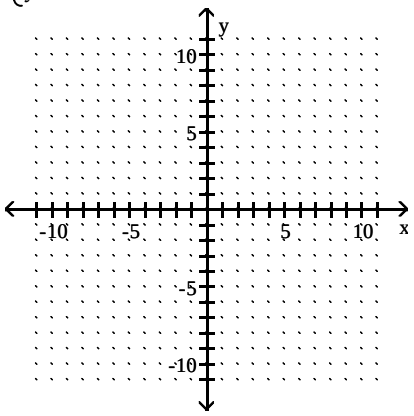
3) $\begin{cases} \frac{1}{6}x - y = 1 \\ x = 6 \end{cases}$



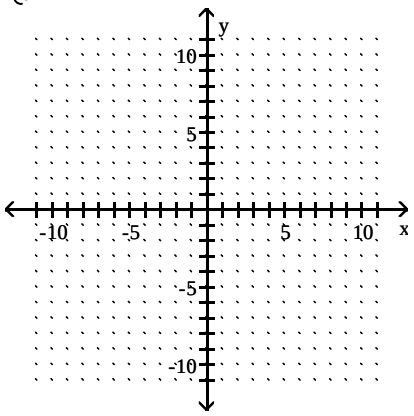
4) $\begin{cases} \frac{1}{5}x - y = 1 \\ x = 5 \end{cases}$



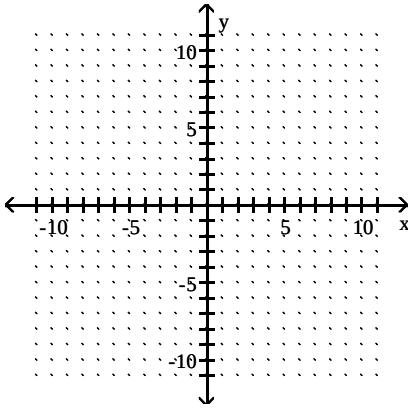
5) $\begin{cases} y = x - 5 \\ y = -2x + 4 \end{cases}$



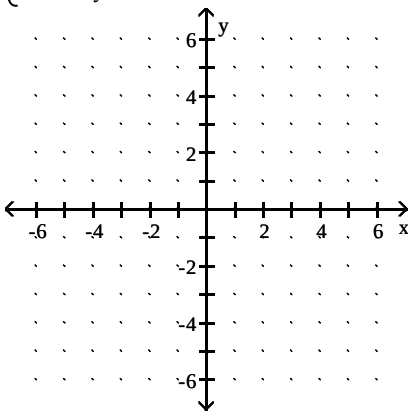
6) $\begin{cases} y = x + 5 \\ y = -3x + 9 \end{cases}$



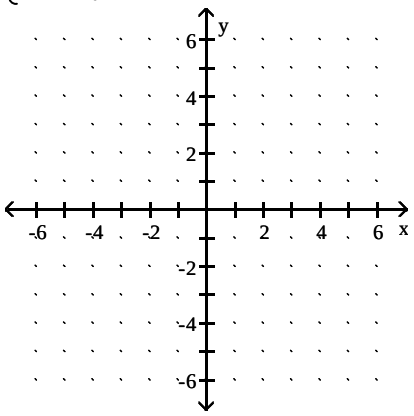
7) $\begin{cases} y = x - 1 \\ y = -3x - 9 \end{cases}$



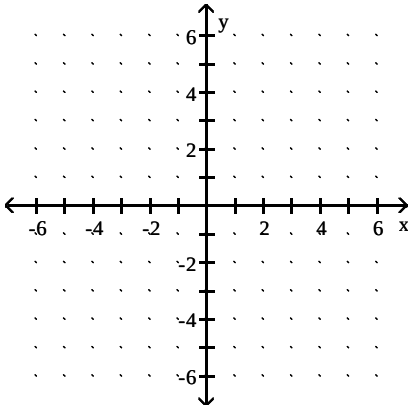
8) $\begin{cases} 3x + y = -9 \\ 5x + 5y = 5 \end{cases}$



9) $\begin{cases} 5x + y = -10 \\ 6x + 6y = 12 \end{cases}$



10) $\begin{cases} \frac{1}{3}x - y = 1 \\ x = 3 \end{cases}$



Solve the system by the substitution method. If there is no solution or an infinite number of solutions, so state. Use set notation to express the solution set.

11) $\begin{cases} x + y = 3 \\ y = -4x \end{cases}$

12) $\begin{cases} x + y = -9 \\ y = -4x \end{cases}$

13) $\begin{cases} x - 3y = -10 \\ 4x - 4y = 8 \end{cases}$

14) $\begin{cases} x + 3y = 17 \\ 2x + 2y = 14 \end{cases}$

15) $\begin{cases} x + 7y = -5 \\ -6x + 8y = 30 \end{cases}$

16) $\begin{cases} x + 3y = -2 \\ 2x + 4y = -4 \end{cases}$

17) $\begin{cases} 7x - 5y = 35 \\ 3x + 2y = 15 \end{cases}$

18) $\begin{cases} -4x - 7y = -16 \\ -2x - 3y = -8 \end{cases}$

19) $\begin{cases} x + y = -2 \\ x - y = 18 \end{cases}$

20) $\begin{cases} x + y = -7 \\ x - y = 15 \end{cases}$

21) $\begin{cases} y = 2x - 2 \\ y = 5x - 1 \end{cases}$

22) $\begin{cases} y = 5x - 4 \\ y = 7x - 5 \end{cases}$

23) $\begin{cases} -7x + 8y = 68 \\ -4x - 5y = -9 \end{cases}$

24) $\begin{cases} 5x - 6y = -10 \\ 3x - 3y = -3 \end{cases}$

25) $\begin{cases} 9x + 8y = 64 \\ -6x - 2y = -16 \end{cases}$

26) $\begin{cases} 9x + 8y = 16 \\ 6x + 2y = 4 \end{cases}$

27) $\begin{cases} \frac{1}{4}x + \frac{1}{4}y = -1 \\ x - y = 2 \end{cases}$

28) $\begin{cases} \frac{1}{2}x + \frac{1}{2}y = 5 \\ x - y = 8 \end{cases}$

29) $\begin{cases} x - 5y = -36 \\ -7x - 6y = -35 \end{cases}$

30) $\begin{cases} x - 5 = y \\ y + 4 = x \end{cases}$

31) $\begin{cases} x - 7 = y \\ y + 8 = x \end{cases}$

32) $\begin{cases} x = -y \\ x + y = 6 \end{cases}$

33) $\begin{cases} 3x + y = 11 \\ 12x + 4y = 44 \end{cases}$

34) $\begin{cases} -2x - 4y = -4 \\ 5x + 10y = 0 \end{cases}$

35) $\begin{cases} -4x - 8y = -5 \\ 4x + 8y = 0 \end{cases}$

36) $\begin{cases} y - 2x = 4 \\ 3y = 6x + 12 \end{cases}$

37) $\begin{cases} y - 6x = 4 \\ 6y = 36x + 24 \end{cases}$

38) $\begin{cases} x = -y \\ x + y = 6 \end{cases}$

39) $\begin{cases} 2x + y = 8 \\ 6x + 3y = 24 \end{cases}$

40) $\begin{cases} 3x + y = 9 \\ 6x + 2y = 18 \end{cases}$

41) $\begin{cases} 3x + y = 9 \\ 9x + 3y = 27 \end{cases}$

42) $\begin{cases} y - 6x = 5 \\ 2y = 12x + 10 \end{cases}$

Solve the problem.

43) One number is 5 less than a second number. Twice the second number is 11 less than 5 times the first. Find the two numbers.

44) One number is 3 less than a second number. Twice the second number is 6 less than 5 times the first. Find the two numbers.

45) One number is 1 less than a second number. Twice the second number is 23 more than 5 times the first. Find the two numbers.

46) One number is 10 less than a second number. Twice the second number is 33 more than 3 times the first. Find the two numbers.

47) A vendor sells hot dogs and bags of potato chips. A customer buys 4 hot dogs and 2 bags of potato chips for $13.00. Another customer buys 3 hot dogs and 4 bags of potato chips for $13.50. Find the cost of each item.

48) A vendor sells hot dogs and bags of potato chips. A customer buys 3 hot dogs and 4 bags of potato chips for $9.50. Another customer buys 2 hot dogs and 4 bags of potato chips for $8.00. Find the cost of each item.

49) A tour group split into two groups when waiting in line for food at a fast food counter. The first group bought 8 slices of pizza and 5 soft drinks for $28.50. The second group bought 7 slices of pizza and 6 soft drinks for $ 27.44. How much does one slice of pizza cost?

1) {(4, –2)}
2) {(1, 3)}
3) {(6, 0)}
4) {(5, 0)}
5) {(3, –2)}
6) {(1, 6)}
7) {(–2, –3)}
8) {(–5, 6)}
9) {(–3, 5)}
10) {(3, 0)}
11) {(–1, 4)}
12) {(3, –12)}
13) {(8, 6)}
14) {(2, 5)}
15) {(–5, 0)}
16) {(–2, 0)}
17) {(5, 0)}
18) {(4, 0)}
19) $\{(8, -10)\}$
20) $\{(4, -11)\}$
21) $\left\{\left(-\frac{1}{3}, -\frac{8}{3}\right)\right\}$
22) $\left\{\left(\frac{1}{2}, -\frac{3}{2}\right)\right\}$
23) {(–4, 5)}
24) {(4, 5)}
25) {(0, 8)}
26) {(0, 2)}
27) {(–1, –3)}
28) {(9, 1)}
29) {(–1, 7)}
30) no solution; ∅
31) no solution; ∅
32) no solution; ∅
33) infinitely many solutions; {(x, y)| 3x + y = 11} or {(x, y)| 12x + 4y = 44}
34) no solution; ∅
35) no solution; ∅
36) infinitely many solutions; {(x, y)| y – 2x = 4} or {(x, y)| 3y = 6x + 12}
37) infinitely many solutions; {(x, y)| y – 6x = 4} or {(x, y)| 6y = 36x + 24}
38) no solution; ∅
39) infinitely many solutions; {(x, y)| 2x + y = 8} or {(x, y)| 6x + 3y = 24}
40) infinitely many solutions; {(x, y)| 3x + y = 9} or {(x, y)| 6x + 2y = 18}
41) infinitely many solutions; {(x, y)| 3x + y = 9} or {(x, y)| 9x + 3y = 27}
42) infinitely many solutions; {(x, y)| y – 6x = 5} or {(x, y)| 2y = 12x + 10}
43) 7 and 12
44) 4 and 7
45) –7 and –6
46) –13 and –3
47) $2.50 for a hot dog; $1.50 for a bag of potato chips

48) $1.50 for a hot dog; $1.25 for a bag of potato chips
49) $2.60 per slice of pizza