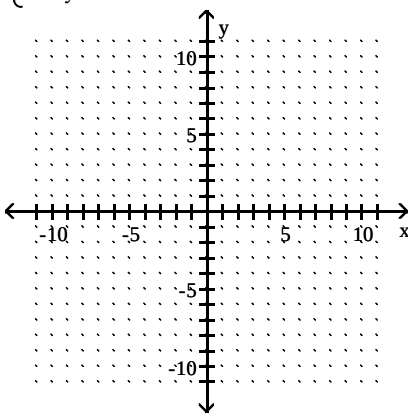
Math 084 Spring 2014 Quiz 7 Preparation sections sections 4.1 & 4.2 v03
Dressler

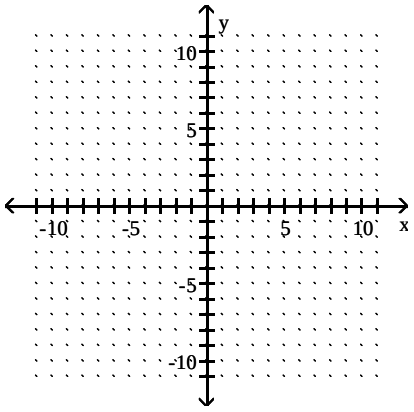
Name_____

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.

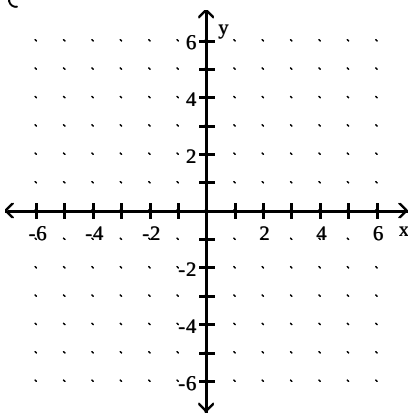
1) $\begin{cases} x + y = -4 \\ x - y = 2 \end{cases}$



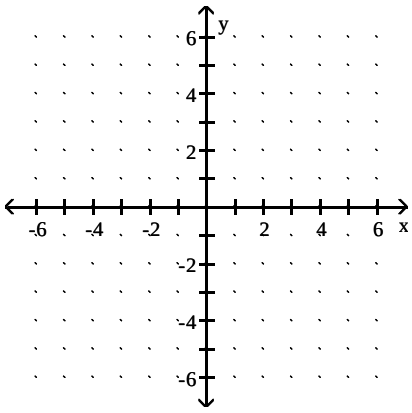
2) $\begin{cases} x + y = -3 \\ x - y = -1 \end{cases}$



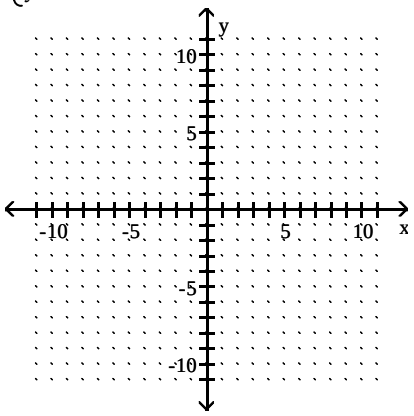
3) $\begin{cases} \frac{1}{4}x - y = 1 \\ x = 4 \end{cases}$



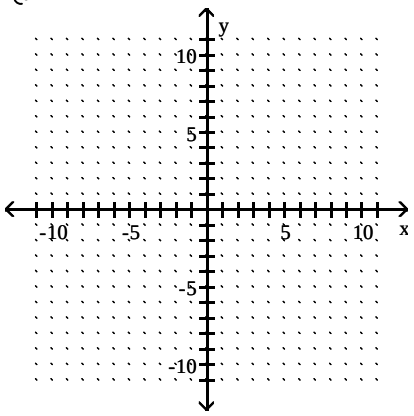
4) $\begin{cases} \frac{1}{2}x - y = 1 \\ x = 2 \end{cases}$



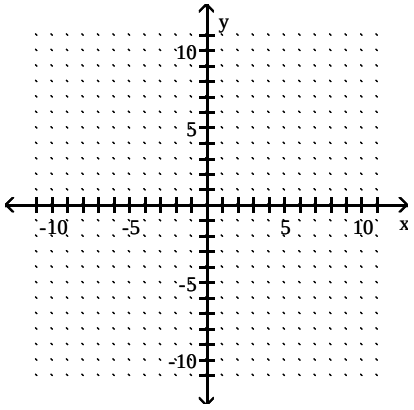
5) $\begin{cases} y = -x - 5 \\ y = 3x + 3 \end{cases}$



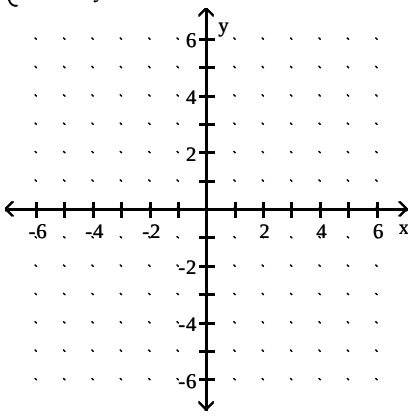
6) $\begin{cases} y = -x + 6 \\ y = 3x - 6 \end{cases}$



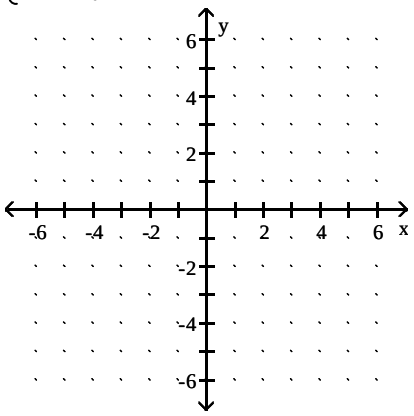
7) $\begin{cases} y = x + 4 \\ y = -3x + 8 \end{cases}$



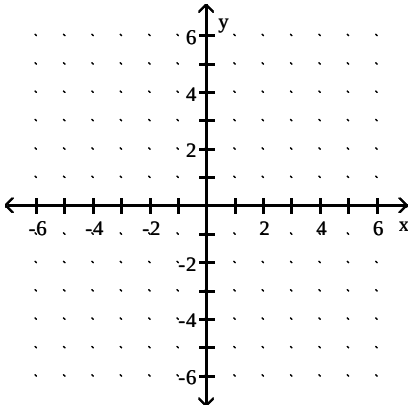
8) $\begin{cases} 3x + y = -11 \\ 4x + 6y = 4 \end{cases}$



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



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



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

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

13) $\begin{cases} x + 9y = -15 \\ 4x + 8y = -4 \end{cases}$

14) $\begin{cases} x + 4y = -14 \\ -5x + 3y = -45 \end{cases}$

15) $\begin{cases} x + 6y = 4 \\ 6x + 7y = 24 \end{cases}$

16) $\begin{cases} x - 7y = 8 \\ -4x - 6y = -32 \end{cases}$

17) $\begin{cases} -6x + 8y = 36 \\ 2x + 2y = -12 \end{cases}$

18) $\begin{cases} -4x - 5y = -28 \\ -2x - 2y = -14 \end{cases}$

19) $\begin{cases} x + y = -2 \\ x - y = 12 \end{cases}$

20) $\begin{cases} x + y = -2 \\ x - y = 11 \end{cases}$

21) $\begin{cases} y = 5x - 9 \\ y = 7x - 8 \end{cases}$

22) $\begin{cases} y = 5x - 7 \\ y = 8x - 8 \end{cases}$

23) $\begin{cases} -7x + 9y = -8 \\ -2x - 6y = -28 \end{cases}$

24) $\begin{cases} 9x + 9y = 153 \\ -7x + 4y = -20 \end{cases}$

25) $\begin{cases} 8x - 7y = 28 \\ 6x + 4y = -16 \end{cases}$

26) $\begin{cases} -7x + 6y = 24 \\ -5x - 4y = -16 \end{cases}$

27) $\begin{cases} \frac{1}{3}x + \frac{1}{3}y = 2 \\ x - y = -8 \end{cases}$

28) $\begin{cases} \frac{1}{3}x + \frac{1}{3}y = 0 \\ x - y = 10 \end{cases}$

29) $\begin{cases} x - 5y = 29 \\ 7x - 6y = 58 \end{cases}$

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

31) $\begin{cases} x - 8 = y \\ y + 6 = x \end{cases}$

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

33) $\begin{cases} 2x + y = 10 \\ 6x + 3y = 30 \end{cases}$

34) $\begin{cases} -6x - 18y = -9 \\ 2x + 6y = 0 \end{cases}$

35) $\begin{cases} -3x - 9y = -8 \\ 6x + 18y = 0 \end{cases}$

36) $\begin{cases} y - 4x = 5 \\ 4y = 16x + 20 \end{cases}$

37) $\begin{cases} y - 3x = 4 \\ 5y = 15x + 20 \end{cases}$

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

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

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

41) $\begin{cases} 4x + y = 12 \\ 16x + 4y = 48 \end{cases}$

42) $\begin{cases} y - 6x = 5 \\ 4y = 24x + 20 \end{cases}$

Solve the problem.

43) One number is 4 less than a second number. Twice the second number is 3 less than 3 times the first. Find the two numbers.

44) One number is 3 less than a second number. Twice the second number is 24 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 6 more than 3 times the first. Find the two numbers.

46) One number is 8 less than a second number. Twice the second number is 40 more than 4 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 3 bags of potato chips for $8.25. Another customer buys 2 hot dogs and 5 bags of potato chips for $6.75. Find the cost of each item.

48) A vendor sells hot dogs and bags of potato chips. A customer buys 5 hot dogs and 3 bags of potato chips for $14.25. Another customer buys 2 hot dogs and 3 bags of potato chips for $7.50. 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 7 soft drinks for $38.00. The second group bought 6 slices of pizza and 6 soft drinks for $ 29.88. How much does one slice of pizza cost?

1) {(–1, –3)}
2) {(–2, –1)}
3) {(4, 0)}
4) {(2, 0)}
5) {(–2, –3)}
6) {(3, 3)}
7) {(1, 5)}
8) {(–5, 4)}
9) {(–2, 5)}
10) {(6, 0)}
11) {(–2, –4)}
12) {(–3, 12)}
13) {(3, –2)}
14) {(6, –5)}
15) {(4, 0)}
16) {(8, 0)}
17) {(–6, 0)}
18) {(7, 0)}
19) $\{(5, -7)\}$
20) $\left\{\left(\frac{9}{2}, -\frac{13}{2}\right)\right\}$
21) $\left\{\left(-\frac{1}{2}, -\frac{23}{2}\right)\right\}$
22) $\left\{\left(\frac{1}{3}, -\frac{16}{3}\right)\right\}$
23) {(5, 3)}
24) {(8, 9)}
25) {(0, –4)}
26) {(0, 4)}
27) {(–1, 7)}
28) {(5, –5)}
29) {(4, –5)}
30) no solution; ∅
31) no solution; ∅
32) no solution; ∅
33) infinitely many solutions; {(x, y)| 2x + y = 10} or {(x, y)| 6x + 3y = 30}
34) no solution; ∅
35) no solution; ∅
36) infinitely many solutions; {(x, y)| y – 4x = 5} or {(x, y)| 4y = 16x + 20}
37) infinitely many solutions; {(x, y)| y – 3x = 4} or {(x, y)| 5y = 15x + 20}
38) no solution; ∅
39) infinitely many solutions; {(x, y)| 4x + y = 11} or {(x, y)| 12x + 3y = 33}
40) infinitely many solutions; {(x, y)| 2x + y = 8} or {(x, y)| 6x + 3y = 24}
41) infinitely many solutions; {(x, y)| 4x + y = 12} or {(x, y)| 16x + 4y = 48}
42) infinitely many solutions; {(x, y)| y – 6x = 5} or {(x, y)| 4y = 24x + 20}
43) 11 and 15
44) 10 and 13
45) –4 and –3
46) –12 and –4

47) $1.50 for a hot dog; $0.75 for a bag of potato chips
48) $2.25 for a hot dog; $1.00 for a bag of potato chips
49) $3.14 per slice of pizza