

Additional Exercises 4.6
Form I
Linear Inequalities in Two Variables

Determine if the ordered pair satisfies the inequality.

1. $x - y \leq 8$: (2, 1)

1. _____

2. $x - y \leq -2$: (1, 1)

2. _____

3. $2x + 3y \leq -6$: (-3, 0)

3. _____

4. $x + 2y > -3$: (-3, 2)

4. _____

5. $x + 2y > -6$: (6, -5)

5. _____

6. $y > -x + 2$: (-3, 8)

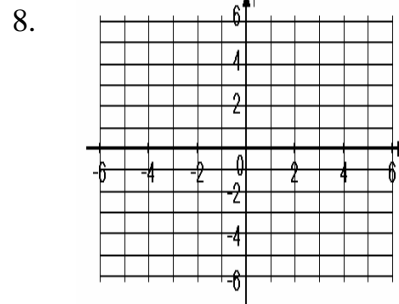
6. _____

7. $x \leq y - 7$: (5, 11)

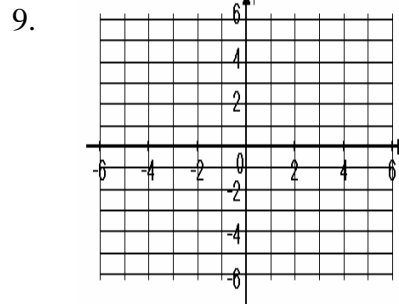
7. _____

Graph the linear inequality.

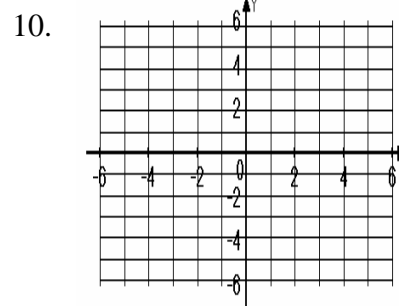
8. $3x + y \leq -4$



9. $x + y < 2$

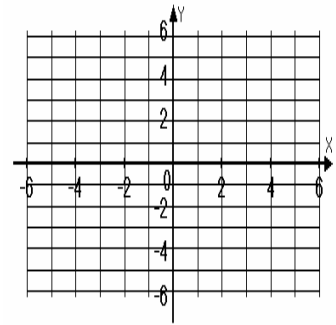


10. $2x + 3y \leq 6$



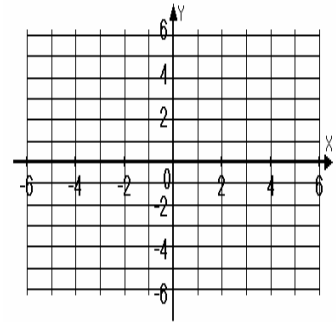
11. $-2x - 5y \leq 10$

11.



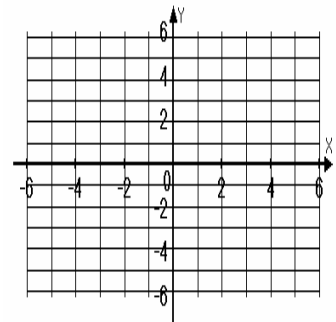
12. $x > -2$

12.



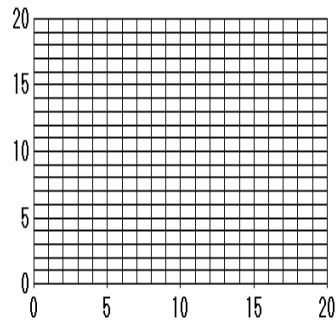
13. $y \leq 4$

13.



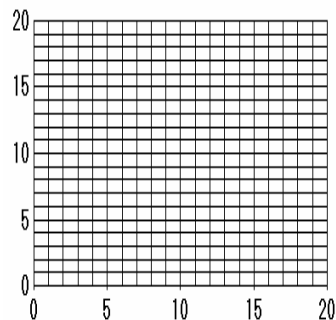
14. A furniture company manufactures chairs and tables. Each chair requires 3 labor-hours to manufacture. Each table requires 4 labor-hours to manufacture. The company has 36 labor-hours available per day. Graph an inequality that describes when the labor-hours for making x chairs and y tables will not exceed the number of labor-hours the company has available.

14.



15. A man has \$9.00 and wants to buy pretzels and soda from a vendor. The pretzels cost \$0.75 per bag and the sodas cost \$1.00 per cup. Graph an inequality that describes when the cost of x bags of pretzels and y cups of soda does not exceed the amount of money the man has to spend.

15.



Additional Exercises 4.6
Form II
Linear Inequalities in Two Variables

Determine if the ordered pair satisfies the inequality.

1. $x - y \leq 8$: (2, -6)

1. _____

2. $x - y \leq -2$: (3, 4)

2. _____

3. $2x + 3y \leq -6$: (2, -5)

3. _____

4. $x + 2y > -3$: (1, 1)

4. _____

5. $x + 2y > -6$: (-3, -3)

5. _____

6. $y > -x + 2$: (5, 3)

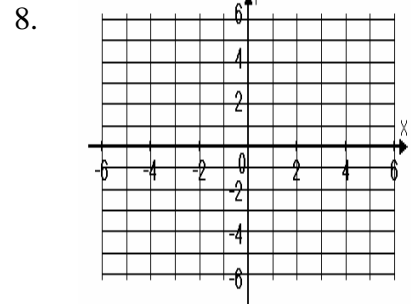
6. _____

7. $x \leq y - 7$: (1, 8)

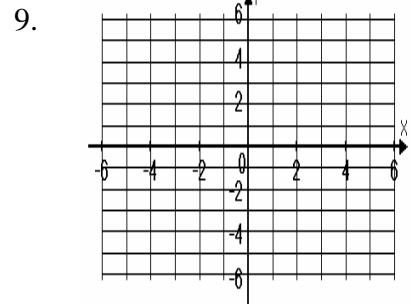
7. _____

Graph the linear inequality.

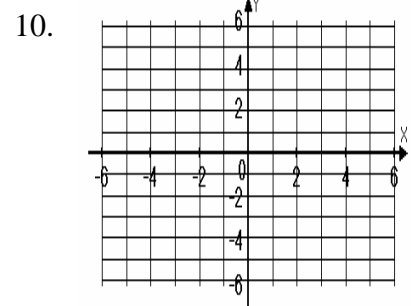
8. $2x + 3y > 6$



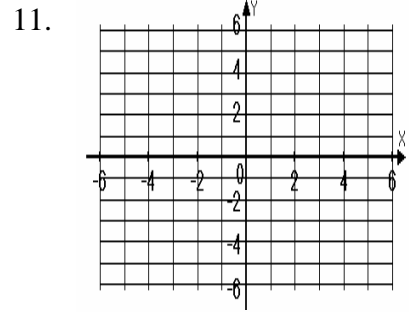
9. $x - 2y \leq 4$



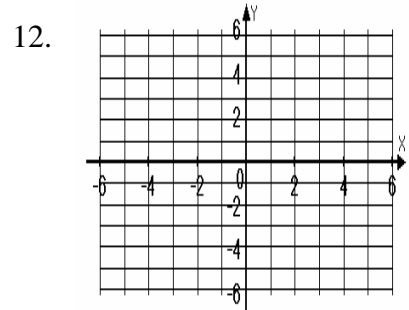
10. $2x - 4y > -8$



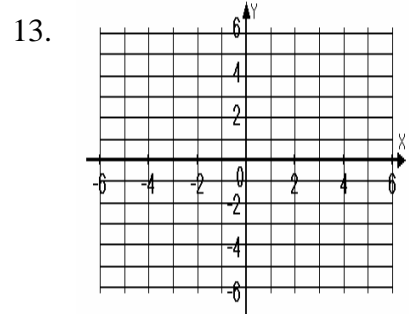
11. $2x - 3y \leq 6$



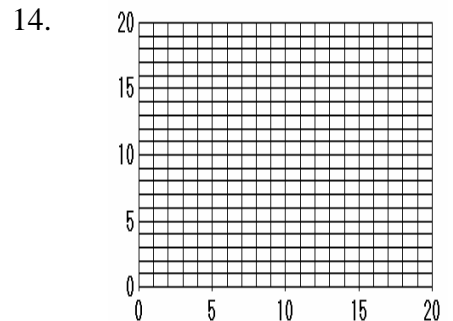
12. $x > 3$



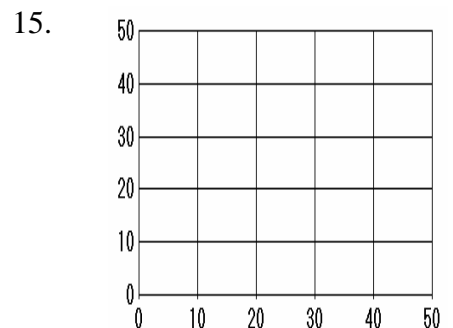
13. $y > -5$



14. A delivery company has two sizes of boxes to ship. Their small box has a volume of 7 cubic feet and their large box has a volume of 14 cubic feet. Each of the company's trucks can carry 140 cubic feet of cargo. Graph an inequality that describes when the volumes of x small boxes and y large does not exceed the volume of a truck..



15. A woman works out by running and swimming. When she runs, she burns 8 calories per minute. When she swims, she burns 10 calories per minute. She wants to burn at least 480 calories in her workout. Graph an inequality that describes when x minutes running and y minutes swimming will burn at least as many calories as the woman wants to burn.



Additional Exercises 4.6
Form III
Linear Inequalities in Two Variables

Determine if the ordered pair satisfies the inequality.

1. $x - y \leq 8$: (10, -1)

1. _____

2. $x - y \leq -2$: (3, 4)

2. _____

3. $2x + 3y \leq -6$: (-5, 0)

3. _____

4. $x + 2y > -3$: (4, 1)

4. _____

5. $x + 2y > -6$: (-3, -1)

5. _____

6. $y > -x + 2$: (1, 4)

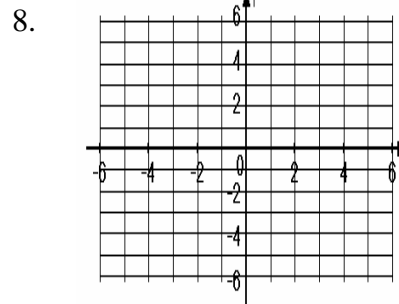
6. _____

7. $x \leq y - 7$: (3, 1)

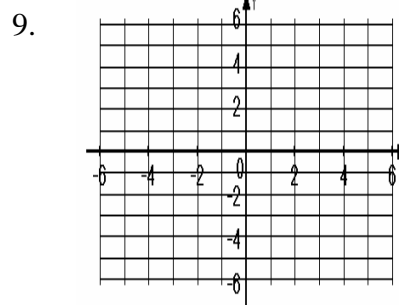
7. _____

Graph the linear inequality.

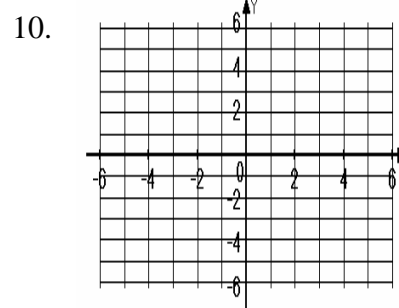
8. $2x - 5y \leq 10$



9. $3x + 4y > 8$



10. $3x - 5y > 15$

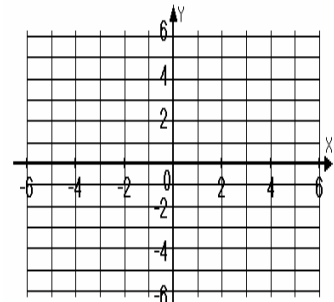


Name _____

Date _____

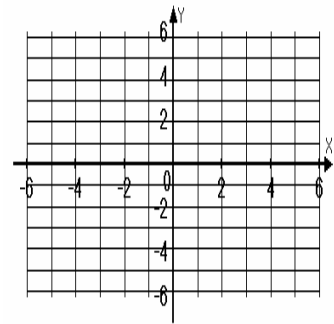
11. $2x + 4y \leq -16$

11.



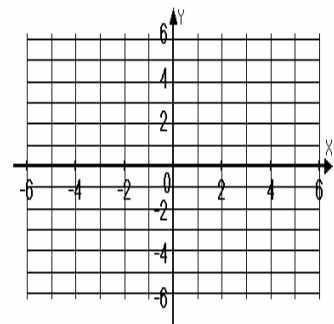
12. $x < -3$

12.



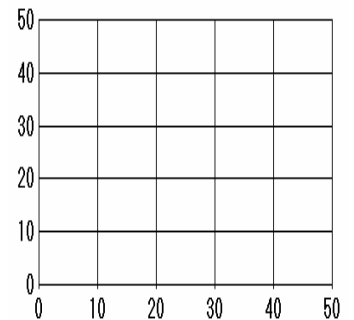
13. $y > 2$

13.



14. A woman works out by running and swimming. When she runs she burns 7 calories per minute. When she swims, she burns 12 calories per minute. She wants to burn at least 420 calories in her workout. Graph an inequality that describes when x minutes running and y minutes swimming will burn at least as many calories as the woman wants to burn.

14.



15. A certain nonprescription drug to treat cold symptoms is sold in bottles that contain 24 tablets. The directions state that the adult dosage is 3 tablets and the dosage for children is 2 tablets. Graph an inequality that describes when the tablets for x adult doses and y child doses exceed the number of tablets available in one bottle.

15.

