

SECTION 3.3

1. Use the table to solve the inequality $0.5(3x - 1) > 4$. Indicate on the table how you found your solution.

X	Y1	Y2
-1	-2	
0	-1.5	
1	1	
2	2.5	
3	4	
4	5.5	
5	7	
Y1=0.5(3X-1)		

2. Use the table to solve the inequality $3 - 2x \geq 0$. Indicate on the table how you found your solution.

X	Y1	Y2
-0.5	4	
0	3	
0.5	2	
1	1	
1.5	0	
2	-1	
2.5	-2	
Y1=3-2X		

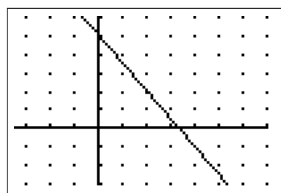
3. Use the table to solve the inequality $x + 1 \leq 2(x - 4)$. Indicate on the table how you found your solution. $Y_1 = x + 1$ and $Y_2 = 2(x - 4)$.

X	Y1	Y2
8	9	8
8.5	9.5	9
9	10	10
9.5	10.5	11
10	11	12
10.5	11.5	13
11	12	14
X=11		

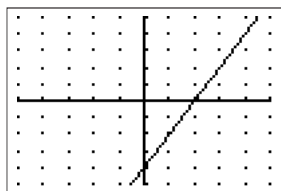
4. Use the table to solve the inequality $2x + 4 > -4x - 5$. Indicate on the table how you found your solution. $Y_1 = 2x + 4$ and $Y_2 = -4x - 5$.

X	Y1	Y2
-3.5	-3	9
-3	-2	7
-2.5	-1	5
-2	0	3
-1.5	1	1
-1	2	-1
-0.5	3	-3
X=-.5		

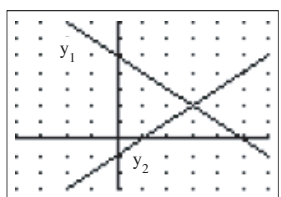
5. Solve the inequality $3x - 5 < -11$ numerically.
6. Solve the inequality $-\frac{1}{2}x - 5 \geq -7$ numerically.
7. Use the graph of $y = -\frac{3}{2}x + 5$ shown, to solve the inequality $-\frac{3}{2}x + 5 \geq -1$.



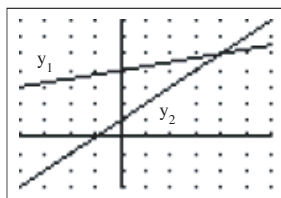
8. Use the graph of $y = 2x - 4$ shown, to solve the inequality $2x - 4 < 2$.



9. Use the graph shown to solve the inequality $-x + 5 < x - 1$ where $y_1 = -x + 5$ and $y_2 = x - 1$.



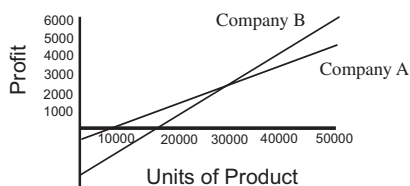
10. Use the graph of y_1 and y_2 shown to solve the inequality $y_1 < y_2$.



11. Solve the inequality $3(x - 2) > 0$ graphically.
 12. Solve the inequality $-2x \leq 3x + 10$ graphically.

Use the graph shown for problems 13–17:

The graph below represents the profit for Companies A and B if they sell x units of their product.



13. Complete the following table by using the graph to estimate.

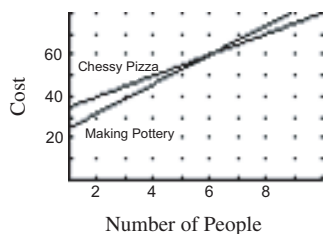
Amount of Product	Company A Profit	Company B Profit
20,000		
45,000		

14. Which company has the larger profit when 20,000 units are produced?

15. Which company has the larger profit when 45,000 units are produced?
16. Approximate from the graph when the two companies' profits are equal.
17. How many units must be sold for Company A's profits to be larger than Company B's profits?

Use the graph shown for problems 18–21:

Below is a graph for the cost of having birthday parties at Cheesy Pizza and Makin' Pottery based on the number of people attending the party. Use the graph to answer the questions.



18. Which party place is more expensive if 8 guests are invited?
19. Which party place is more expensive if 3 guests are invited?
20. When are the costs of the party the same at both places?
21. For what number of guests is it more expensive to have the party at Cheesy Pizza?