

SECTION 3.1

1. Use the table to solve the equation $3x - 2 = -0.5$. Indicate on the table how you found your solution.

X	Y1	
-0.5	-3.5	
0	-2	
0.5	-0.5	
1	1	
1.5	2.5	
2	4	
2.5	5.5	
Y1=3X-2		

2. Use the table to solve the equation $4(x - 2) + 2(x + 3) = 16$. Indicate on the table how you found your solution.

X	Y1	
-2	-14	
-1	-8	
0	-2	
1	4	
2	10	
3	16	
4	22	
Y1=4(X-2)+2(X+3)		

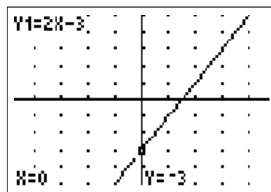
3. Use the table to solve the equation $5 - 2x = 4x + 3.5$. Indicate on the table how you found your solution.

X	Y1	Y2
-0.25	5.5	2.5
0	5	3.5
0.25	4.5	4.5
0.5	4	5.5
0.75	3.5	6.5
1	3	7.5
1.25	2.5	8.5
X=1.25		

4. Use the table to solve the equation $\frac{1}{2}x + 2 = -2x - 1$. Indicate on the table how you found your solution.

X	Y1	Y2
-1.6	1.2	2.2
-1.5	1.25	2.25
-1.4	1.3	2.3
-1.3	1.35	2.35
-1.2	1.4	2.4
-1.1	1.45	2.45
-1	1.5	2.5
Y1=1/2X+2		

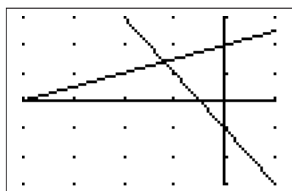
5. Use the graph to solve $2x - 3 = 3$. Indicate on the graph how you found your solution.



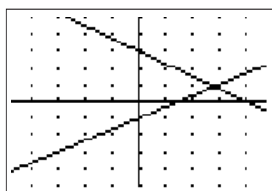
6. Given the graph of $y = -\frac{1}{2}x + 3$, solve the equation $-\frac{1}{2}x + 3 = 4$. Indicate on the graph how you found your solution.

X	Y1	
1	12	
2	5	
3	-1	
4	-4	
5	-6	
6	-7	
7	-8	
Y1=X^2-10X+21		

7. Use the graph to approximate the solution to $\frac{1}{2}x + 2 = -2x - 1$. Indicate on the graph how you found your solution.



8. Use the graph to approximate the solution to $\frac{2}{3}x - 1 = -\frac{3}{4}x + 3$. Indicate on the graph how you found your solution.



9. Solve the linear equation $\frac{3}{4}x + 1 = -\frac{1}{4}x + 3$ numerically. Be sure to indicate the solution in the table.
 10. Solve the linear equation $x - 3 = -3x + 1$ numerically. Be sure to indicate the solution in the table.
 11. Solve the linear equation $x - 2 = \frac{5}{2}x + 4$ graphically. Be sure to indicate the solution on the graph.
 12. Solve the linear equation $2x - 3 = -2x + 5$ graphically. Be sure to indicate the solution on the graph.

For 13–16: Find the x - and y -intercepts. Then graph the line.

13. $4x + 2y = 12$
 14. $-3x + 10y = 40$
 15. $\frac{1}{2}x - \frac{2}{3}y = 6$
 16. $20x - 15y = 4$
 17. Find an appropriate viewing window for the graph of $\frac{1}{2}x - \frac{2}{3}y = 6$. Be sure that you can clearly see both intercepts of the graph.
 18. Find an appropriate viewing window for the graph of $20x - 15y = 4$. Be sure that you can clearly see both intercepts of the graph.
 19. When mail ordering salt-water taffy, it costs \$18.90 for 2 pounds and \$44.80 for 6 pounds.
 A. Assuming that shipping costs are fixed, find a linear equation that models the data.
 B. What is the slope of the line? Interpret this number in the context of the problem.
 20. A person wants to buy x pounds of gumdrops at \$2.95 a pound and y pounds of licorice at \$4.00 a pound. The person spends a total of \$10 on both types of candy.
 A. Write a linear equation for the amount of candy the person can buy.
 B. Find the x - and y -intercepts and interpret the results.