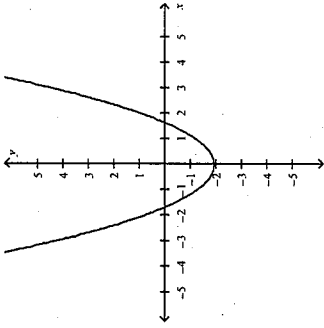
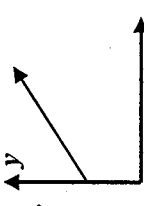
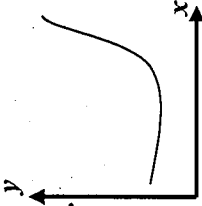
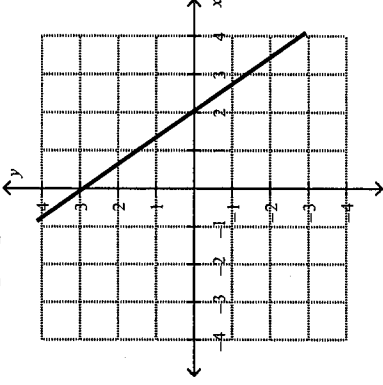


FUNCTIONS

<p>1. Does the graph represent a function? Justify your answer.</p> 	<p>2. Which function has the greater rate of change?</p> <p>A. $y = 2x - 8$</p> <p>B.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>-1</td> <td>-5</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>5</td> </tr> </tbody> </table>	x	y	-1	-5	0	0	1	5	<p>3. Which of the following represents a linear function?</p> <p>A. $y = x^2$</p> <p>B.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4</td> </tr> <tr> <td>2</td> <td>7</td> </tr> <tr> <td>3</td> <td>12</td> </tr> </tbody> </table> <p>C. </p> <p>D. </p>	x	y	1	4	2	7	3	12
x	y																	
-1	-5																	
0	0																	
1	5																	
x	y																	
1	4																	
2	7																	
3	12																	
<p>4. Identify the non-linear functions.</p> <p>A. $y = x^2$</p> <p>B. $y = 2x - 1$</p> <p>C. $y = \frac{x}{4}$</p> <p>D. $y = x^3 + 1$</p>	<p>5. What is the initial value of the function graphed below?</p> 	<p>6. What is the rate of change of a function with a graph which passes through the points (1,5) and (2,9)?</p>																

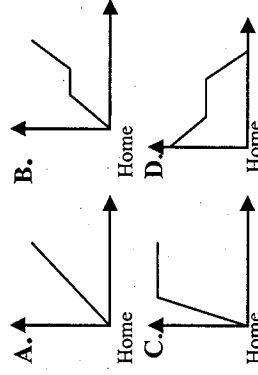
FUNCTIONS

7. Give an equation to model the linear relationship in the table.

x	y
-1	-2
0	3
2	13

8. Give an equation for a line that passes through the point $(-1, 7)$ and has a zero slope.

9. John rode his bicycle from his home to school. On the way to school he stopped to talk to some friends before continuing his trip. Which graph represents this situation?



10. Rate of change is the same as _____.
(Fill in the blank with the proper term.)

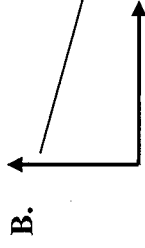
11. Does the table represent a function?
Justify your answer.

x	y
1	7
1	8
2	10

12. Which of the following represents a non-linear function?

A.

x	y
1	1
2	4
3	9

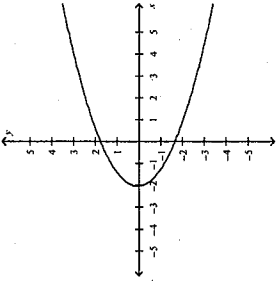
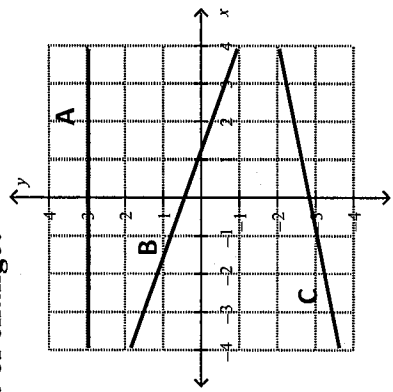
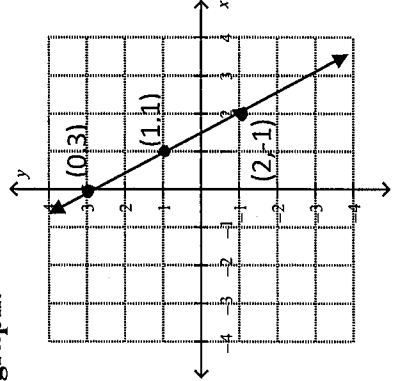


D.

x	y
1	6
2	9
3	12

C. $y = 3x$

FUNCTIONS

<p>13. Give an equation for a line that passes through the point $(-2, 3)$ and has slope -1.</p>	<p>14. Jane pays a basic monthly fee of \$20 for her cell phone. Text messages cost an additional \$0.10 per message.</p> <p>Give an equation to model her total monthly fee, "T", for "m" messages.</p>	<p>15. Does the graph represent a function? Justify your answer.</p> 
<p>16. Which function has a negative rate of change?</p> 	<p>17. Give an equation to model the linear relationship shown in the graph.</p> 	<p>18. In the equation $y = mx + b$, m represents _____ and b represents _____.</p>

FUNCTIONS

19. Which set of points represents a function?

- A. $\{(1,2), (2,2), (3,2), (4,2)\}$
- B. $\{(1,1), (1,2), (3,3), (4,4)\}$
- C. $\{(0,5), (2,7), (3,4), (2,10)\}$
- D. $\{(-1,1), (0,2), (-1,2), (2,4)\}$

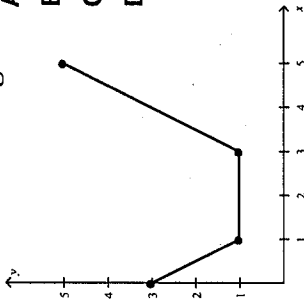
20. During which interval is the function increasing?

A. 0-1

B. 1-3

C. 3-5

D. 0-5



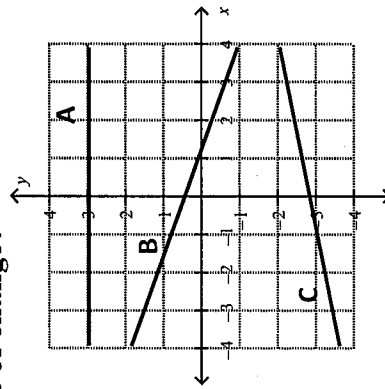
21. Give an equation to model the linear relationship in the table.

x	y
-1	4
1	6
3	8

22. Identify the linear functions.

- A. $y = 3 - x^2$
- B. $y = \frac{1}{3}x$
- C. $y = 5$
- D. $y = \sqrt{x}$

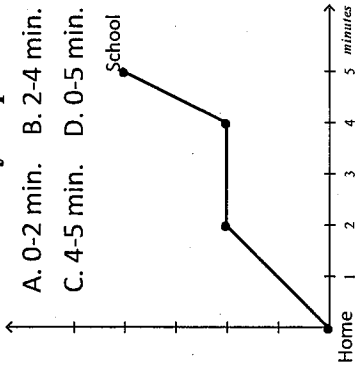
23. Which function has a zero rate of change?



24. The initial value of a function is also called the _____.

FUNCTIONS

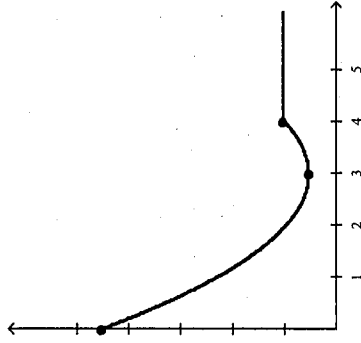
25. The graph represents Sally's trip to school. During which time interval did Sally stop to rest?



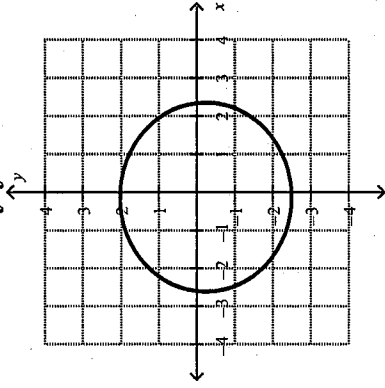
- A. 0-2 min. B. 2-4 min.
C. 4-5 min. D. 0-5 min.

26. In what interval is the function non-linear?

- A. 0-4 B. 0-6 C. 4-6



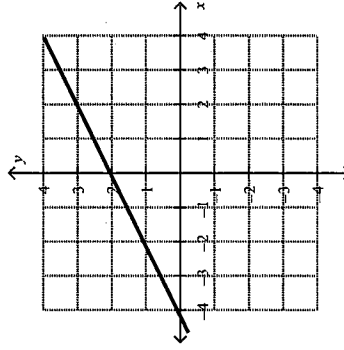
27. Does the graph represent a function? Justify your answer.



28. Give the equation of a line which has slope $\frac{1}{2}$ and passes through the point $(6, -1)$.

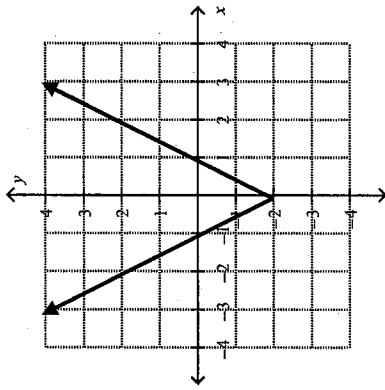
- A. $y = x^2 + 2x + 1$
B. $y - x = 7$
C. $x^2 + y^2 = 25$
D. $\frac{x}{2} + 7 = 2y$

30. Give an equation to model the linear relationship shown in the graph.

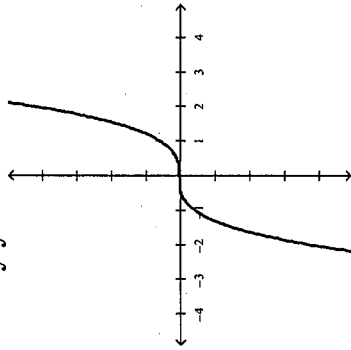


FUNCTIONS

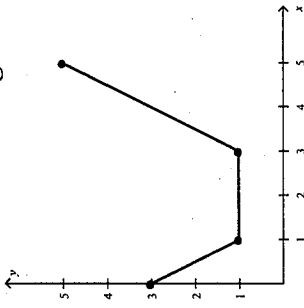
31. Does the graph represent a function?



32. Is the function in the graph linear or non-linear? Justify your answer.



33. During which interval is the function decreasing?



- A. 0-1
- B. 1-3
- C. 3-5
- D. 0-5

34. Give an equation to model the linear relationship in the table.

x	y
0	5
1	7
2	9
3	11

35. Sam will rent a van to transport the baseball team. There is an initial charge of \$40 when he gets the van. He must pay \$35 for each day he has the van.

Give an equation representing the total charge "C" as a function of the number of days, "d", that he keeps the van.

36. Which equation is a linear function?

- A. $x = 5$
- B. $y = x^3$
- C. $\frac{x}{2} + \frac{y}{5} = -3$
- D. $x^2 + y^2 = 4$

FUNCTIONS

37. Which has the greatest rate of change?

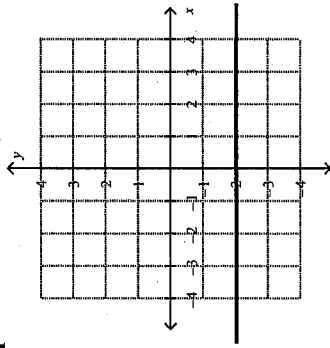
A. $y = \frac{1}{8}x + 9$

B. $y = \frac{x}{2} - 5$

C. $y = 2x + 5$

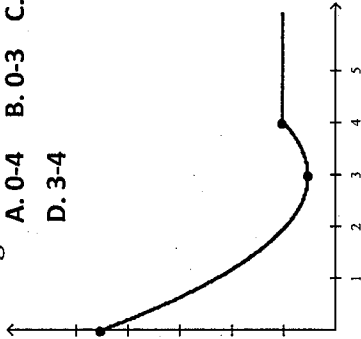
D. $y = 3x - 2$

38. Give an equation to model the linear relationship shown in the graph.



39. In what interval is the function decreasing?

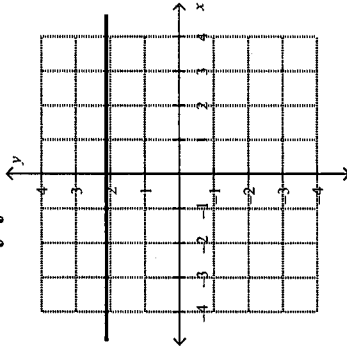
- A. 0-4 B. 0-3 C. 4-6
D. 3-4



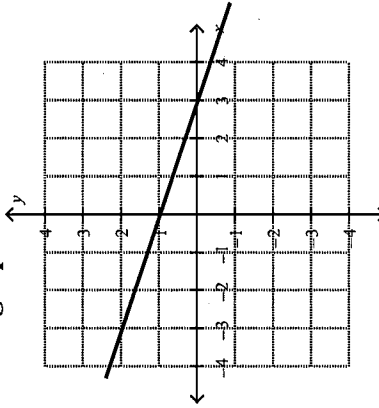
40. Sandy will make cookies for a birthday party. She plans to make 12 cookies for her family and 2 cookies for each guest.

Give an equation showing "C", total cookies, as a function of "g", number of guests.

41. Is the graph a function? Justify your answer.



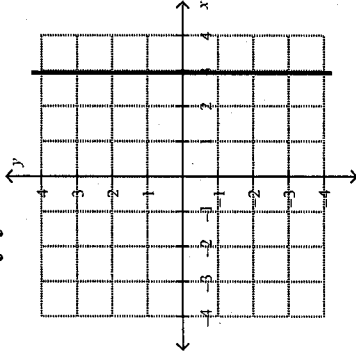
42. What is the initial value of the function graphed below?



FUNCTIONS

43. Write the equation of a line which has slope 4 and passes through the point $(0,1)$.

44. Is the graph a function? Justify your answer.



45. In what interval is the function neither increasing nor decreasing?

- A. 0-4
- B. 0-3
- C. 4-6
- D. 3-4

