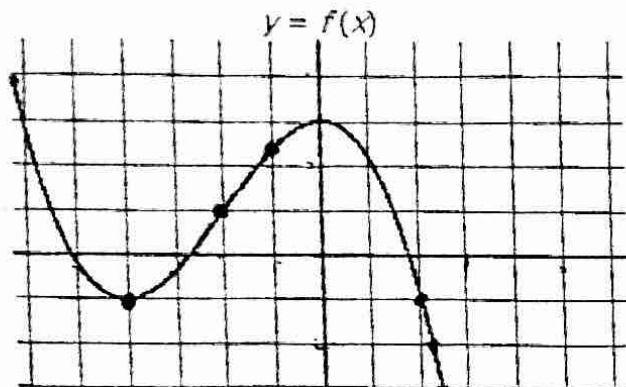


Function Notation

Graphs / Tables / Equations

Name Key

Period _____ Date _____



1. Does the graph represent a function?
Explain.

yes. it passes the vertical line test $\frac{1}{2}$ each input has exactly one output.

Below, find (or approximate) each answer, if possible. If impossible, explain why.

2. $f(-2)$ when $x = -2$, what is y ?

$f(-2) = 1$

4. $f(-1) = 2.5$

6. For what value(s) of x does $f(x) = -2$?

$y = -2$

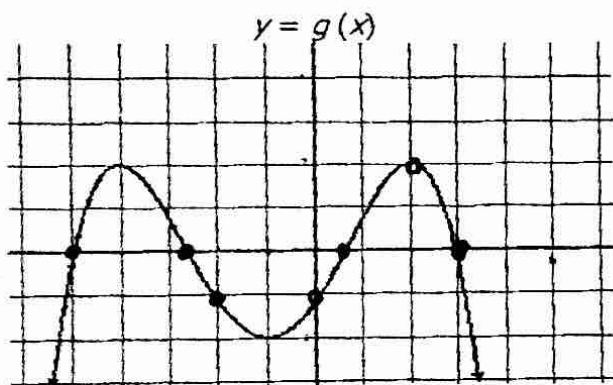
when $x = 2.2$
(approx)

3. $f(2) = -1$

5. $f(3)$ you cannot tell based on the graph provided. only goes slightly past $x = 2$.

7. Find x so $f(x) = -1$.

$x = 2$ and $x = -4$



8. Does the graph represent a function?
Explain.

yes. the graph passes the vertical line test. the vertical line only crosses through 1 point.

Below, find (or approximate) each answer, if possible. If impossible, explain why.

9. $g(-2)$ y when $x = -2$

$g(-2) = -1$

11. $g(3) = 0$

10. $g(2) = 2$

12. $g(0) = -1$

13. For what value(s) of x does $f(x) = 0$?
when $y = 0$,

$x = -5, x = -2.9, x = 0.5, x = 3$

14. Find x so $f(x) = 3$. $y = 3$,

$x =$ impossible.

The y -values max is 2.

$$h(x) = 2x + 1$$

15. $h(3) = 2(3) + 1 = 6 + 1$
 $h(3) = 7$

16. $h(4) = 2(4) + 1$
 $h(4) = 8 + 1 = 9$

17. $h(-1) = 2(-1) + 1$
 $= -2 + 1$
 $h(-1) = -1$

18. $h(0) = 2(0) + 1$
 $h(0) = 1$

19. For what value(s) of x does $h(x) = 7$?

$$7 = 2x + 1$$

$$\begin{array}{r} -1 \\ \hline 6 = 2x \end{array}$$

$$x = 3$$

20. Find x so $h(x) = 14$.

$$14 = 2x + 1$$

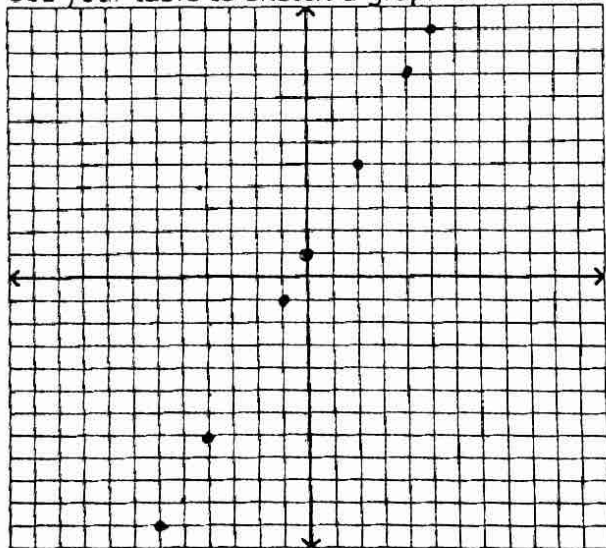
$$13 = 2x$$

$$x = 13/2$$

21. Make a table for the function.

| x | $h(x)$ |
|-----|--------|
| -6 | -11 |
| -4 | -7 |
| -1 | -1 |
| 0 | 1 |
| 2 | 5 |
| 4 | 9 |
| 5 | 11 |

22. Use your table to sketch a graph of the function.



23. What is $h(5)$?

$$h(5) = 11$$

24. For what value(s) of x does $h(x) = 5$?

$$x = 2$$

25. Look at #23 and #24. Explain differences in how the questions were asked and in how you answered them.

question 23 is asking to find the y -value when $x=5$.

question 24 is asking to find the x -value when y (or $h(x)$) = 5.