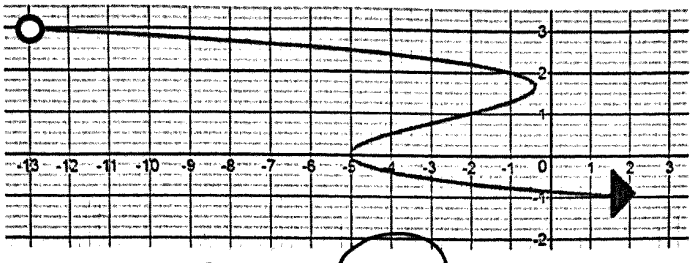
Unit 2 6.4 **Functions Quiz Review** Name Key Period:_____

For questions 1-8: determine if the relation is a function and then determine the domain and range.

1.

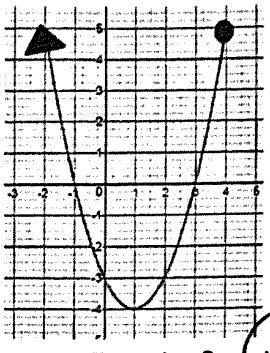


Function? Yes (No)

Domain: $(-13, \infty)$

Range: $(-\infty, 3)$

2.

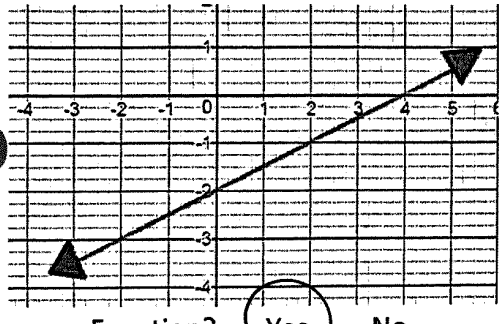


Function? (Yes) No

Domain: $(-\infty, 4]$

Range: $[-4, \infty)$

3.

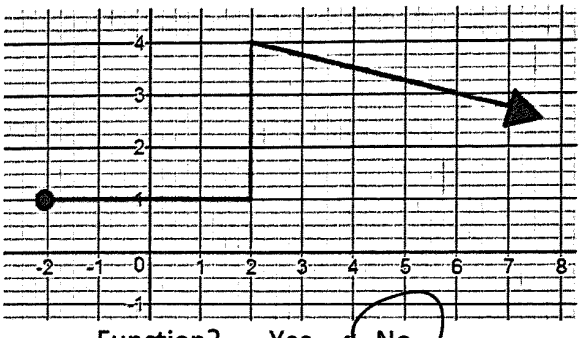


Function? (Yes) No

Domain: $(-\infty, \infty)$

Range: $(-\infty, \infty)$

4.

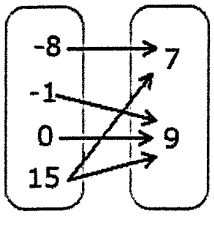


Function? Yes (No)

Domain: $[-2, \infty)$

Range: $(-\infty, 4]$

5.

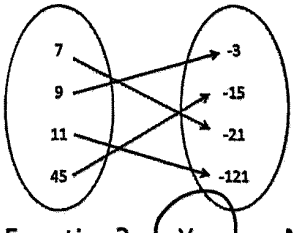



Function? Yes (No)

Domain: $\{-8, -1, 0, 15\}$

Range: $\{7, 9\}$

6.




Function? (Yes) No

Domain: $\{7, 9, 11, 45\}$

Range: $\{-3, -15, -21, -121\}$

7.

| Hours studying | Test points |
|---|---|
| 3 | 27 |
| 6 | 54 |
| 9 | 87 |
| 1 | 8 |
| 7 | 66 |
| 10 | 100 |
| 4 | 33 |
| 2 | 23 |

Function? (Yes) No

Domain: {3, 6, 9, 1, 7, 10, 4, 2}

Range: {27, 54, 87, 8, 66, 100, 33, 23}

8.

| Input | Output |
|---|---|
| 3 | 0 |
| 4 | 7 |
| 5 | 10 |
| 4 | 14 |
| 10 | 25 |

Function? Yes (No)

Domain: {3, 4, 5, 10}

Range: {0, 7, 10, 14, 25}

Given: $a(x) = \frac{1}{2}x - 3$ and $b(x) = 2x^2 - 11$ and $c(x) = -4x + 7$

9. What is $a(6)$?

0

10. If $a(x) = 9$, what is x?

24

11. What is $b(-3)$?

7

12. If $b(x) = 61$, what is x?

$\pm 6$

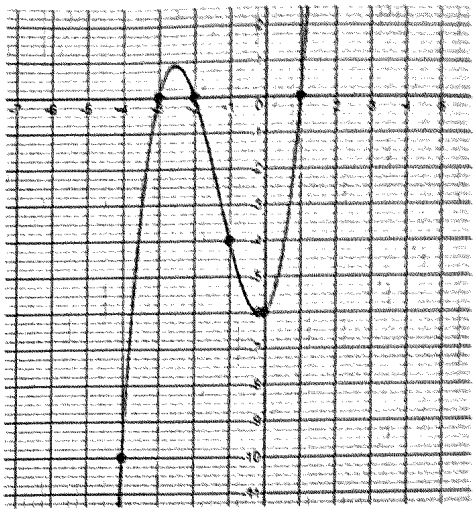
13. What is $c(-41)$?

171

14. If $c(x) = -93$, what is x?

25

For 15-18, use the graph of $f(x)$ to the right.



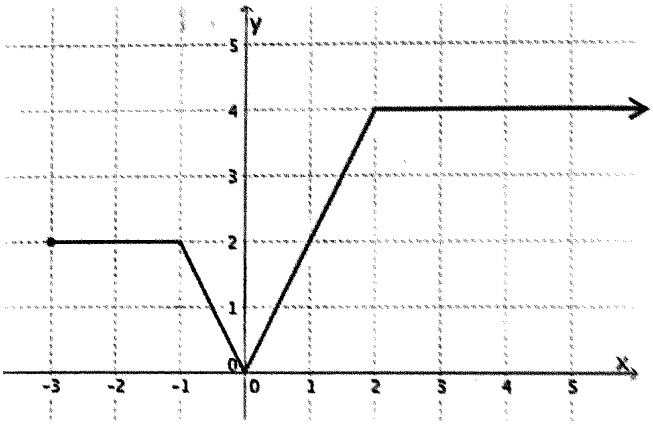
15. What is $f(-1)$? $-4$

16. What is $f(-4)$? $-10$

17. $f(x) = 0$. What is/are the x values? $\{-3, -2, 1\}$

18. $f(x) = -10$. What is/are the x values? $-4$

For 19-22, use the graph of $f(x)$ to the right.




19. What is $f(2)$? $4$

20. What is $f(-3)$? $2$

21. $f(x) = 0$. What is/are the x values? $0$

22. $f(x) = 2$ What is/are the x values? $[-3, -1] \cup 1$

Tim is working hard at earning as much extra credit as he can for the final. The equation that represents this situation is $P(d) = 3d + 8$, where d is the number of days he turns in extra credit, and $P(d)$ represents the number of extra credit points.

23. What does $P(5)$ represent in context of the problem? see teacher

24. What is $P(5)$? 23

25. What does $P(d) = 50$ represent in context of the problem? see teacher

26. If $P(d) = 50$, what is d? 14

27. What does $P(d) = 0$ represent in context of the problem? see teacher

28. Did Tim have any extra credit points before starting these assignments? If so, how many?

yes, 8

Know why