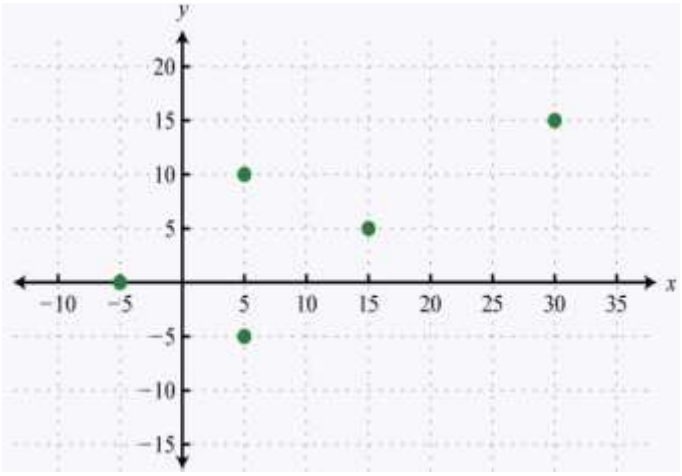
Math 0482 Final Exam Review: Chapter 2

Sections 1-7

Determine the domain and range and state whether the function is a relation or not. Explain.

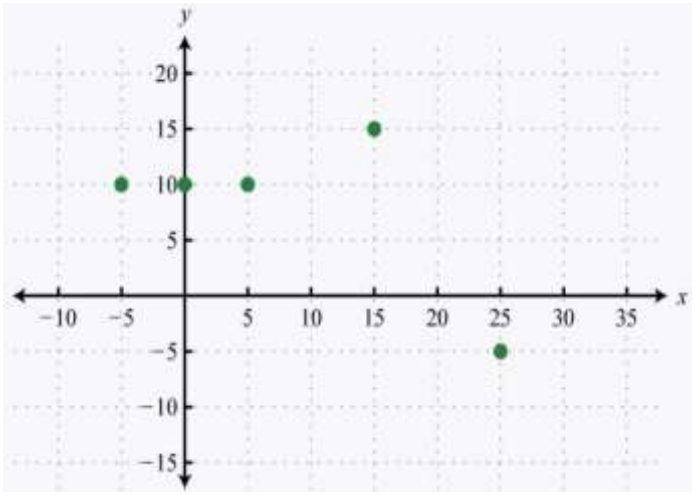
1) {(−3, 0), (−2, 1), (1, 3), (2, 7), (2, 5)}

2)



Function: YES or NO **EXPLAIN:**
Domain
Range

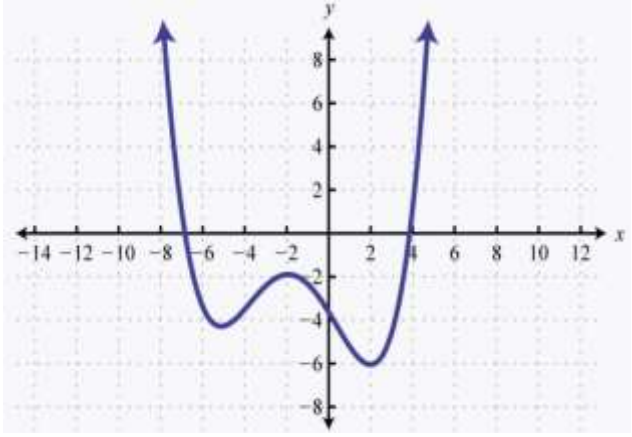
.3)



Function: YES or NO **Explain:**
Domain
Range

Use the Vertical L:ine Test to determine the domain and range and state whether the function is a relation or not

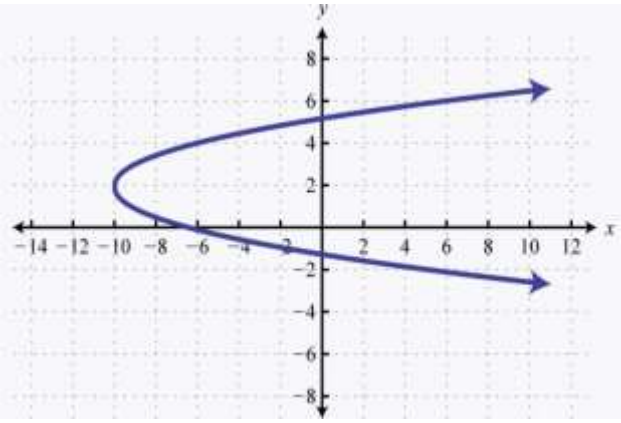
4)



VLT: PASS or FAIL
Function: YES or NO Explain:
Domain:
Range:

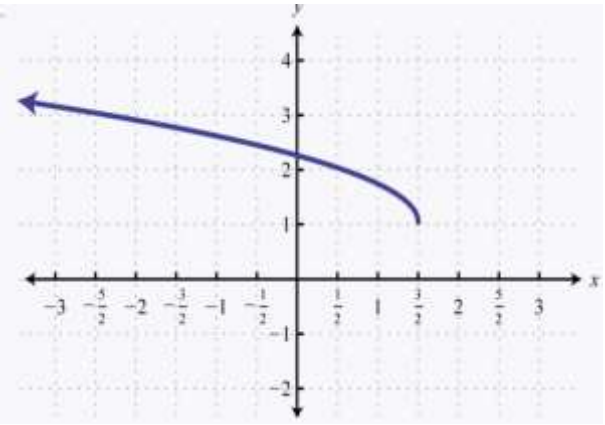
Math 0482 Final Exam Review: Chapter 2

5)



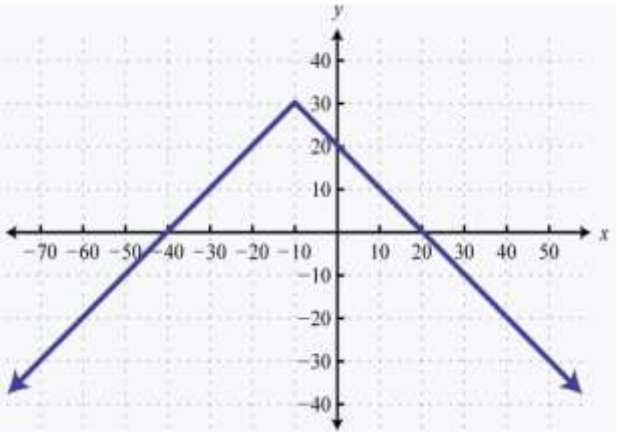
VLT: PASS or FAIL
Function: YES or NO Explain:
Domain:
Range:

6)



VLT: PASS or FAIL
Function: YES or NO Explain:
Domain:
Range:

7)



VLT: PASS or FAIL
Function: YES or NO Explain:
Domain:
Range:

Evaluate.

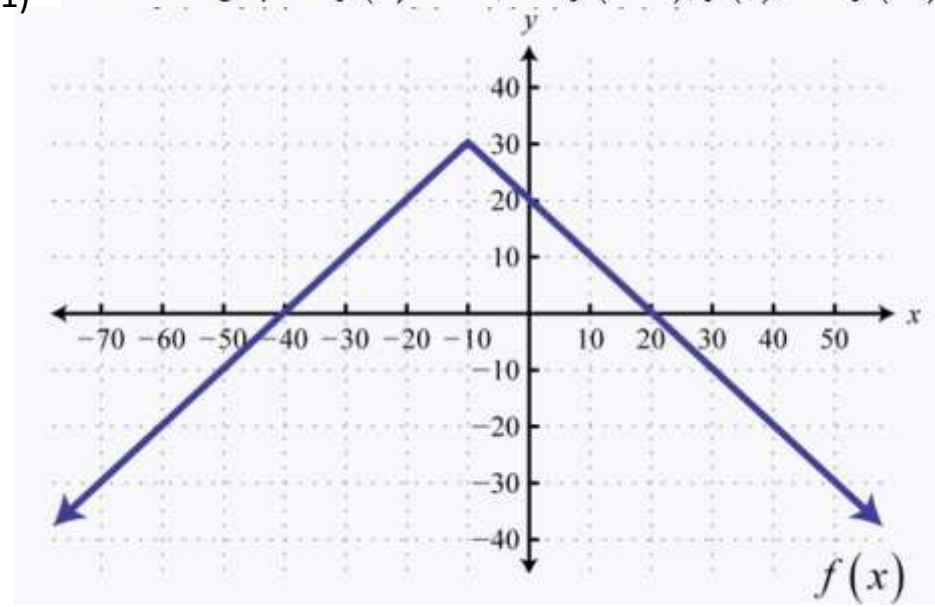
8) $h(x) = \frac{1}{2}x - 3$; $h(-8)$, $h(3)$, and $h(4a+1)$

9) $p(x) = 4 - x$; $p(-10)$, $p(0)$, and $p(5a-1)$

10) $g(x) = \sqrt{2x-1}$; find $g(5)$, $g(1)$, $g(13)$

Math 0482 Final Exam Review: Chapter 2

11) Given the graph of $f(x)$ below, find $f(-60)$, $f(0)$, and $f(20)$.



Graph the following linear equations. Identify the slope and y-intercept.

12) $4x - 8y = 12$

13) $9x + 4y = 6$

14) $\frac{3}{8}x + \frac{1}{2}y = \frac{5}{4}$

15) $\frac{3}{4}x - \frac{1}{2}y = -1$

Find the slope of the line passing through the given points.

16) $(-5, 3)$ and $(-4, 1)$

17) $(-14, 7)$ and $(-10, 7)$

18) $(6, -5)$ and $(6, -2)$

Find the linear function passing through the given points

19) $(7, -6)$ and $(5, -7)$

20) $(-5, -6)$ and $(-3, -9)$

Math 0482 Final Exam Review: Chapter 2

Find the equation of the line.

21) Parallel to $8x - 3y = 24$ and passing through $(-9, 4)$.

22) Perpendicular to $14x + 7y = 10$ and passing through $(8, -3)$.

Use algebra to solve the following:

23) A taxi fare in a certain city includes an initial charge of \$2.50 plus \$2.00 per mile driven. Write a function that gives the cost of a taxi ride in terms of the number of miles driven. Use the function to determine the number of miles driven if the total fare is \$9.70.

Graph the piecewise defined functions.

24) $g(x) = \begin{cases} x^2 & \text{if } x < 5 \\ 10 & \text{if } x \geq 5 \end{cases}$

25) $g(x) = \begin{cases} -5 & \text{if } x < -5 \\ |x| & \text{if } x \geq -5 \end{cases}$

26) $f(x) = \begin{cases} x & \text{if } x \leq -1 \\ x^3 & \text{if } x > -1 \end{cases}$

27) $f(x) = \begin{cases} x & \text{if } x \leq 4 \\ \sqrt{x} & \text{if } x > 4 \end{cases}$

28) $h(x) = \begin{cases} x & \text{if } x < -3 \\ x^2 & \text{if } -3 \leq x < 3 \\ -6 & \text{if } x \geq 3 \end{cases}$

Evaluate.

29) $f(x) = \begin{cases} 5x - 2 & \text{if } x < -6 \\ x^2 & \text{if } x \geq -6 \end{cases}$

Find $f(-10)$, $f(-6)$, and $f(0)$.

30) $g(x) = \begin{cases} -5 & \text{if } x < -4 \\ x - 9 & \text{if } -4 \leq x < 0 \\ \sqrt{x} & \text{if } x \geq 0 \end{cases}$

Find $g(-10)$, $g(0)$ and $g(8)$.