Function Worksheet

Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Decide whether the relation is a function.

1) {(-5, -2), (-1, 1), (3, -6), (8, 1)}

A) Function B) Not a function

2) {(2, -9), (2, -2), (6, 8), (8, 1), (11, -7)}

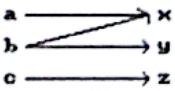
A) Not a function B) Function

3) {(-8, 2), (-8, 8), (-1, 6), (4, 7), (7, 5)}

A) Function B) Not a function

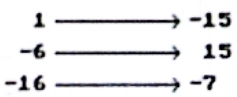
Determine whether the relation is a function.

4)



A) Function B) Not a function

5)

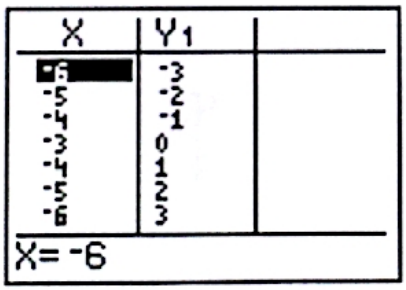


A) Function B) Not a function

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Determine whether the relation is a function. Respond either "function" or "not a function". If it is not a function then state what is wrong in the relation that prevents it from being a function.

6)



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine whether the relation is a function.

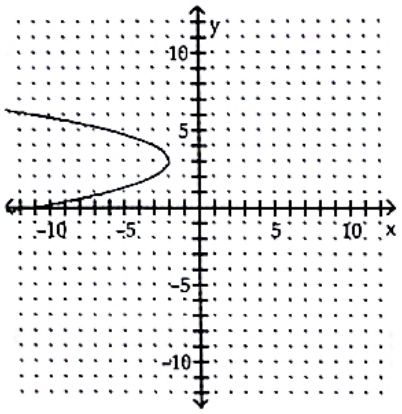
7)

A) Function B) Not a function

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Decide whether the relation is a function. If it is a function, respond "yes" and state the domain and range. If the relation is not a function, respond "no" then state the necessary restrictions on the domain and range to produce a function.

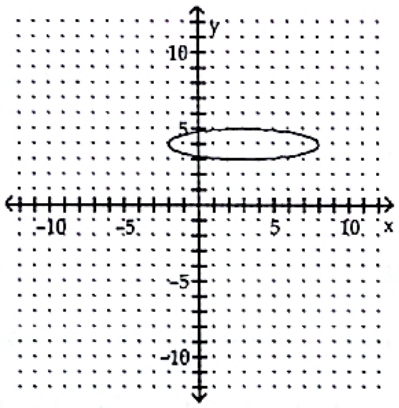
8)



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Decide whether the relation is a function, and give the domain and range.

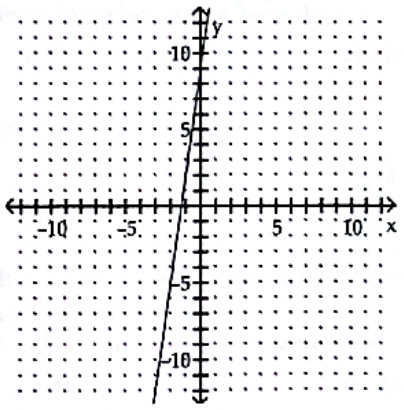
9)



A) Function; domain: [–2, 8]; range: [3, 5]

B) Not a function; domain: [–2, 8]; range: [3, 5]

10)



A) Not a function; domain: (–∞, ∞); range: (–∞, ∞)

B) Function; domain: (–∞, ∞); range: (–∞, ∞)

Determine whether the relation defines y as a function of x. Give the domain.

11) $2x = 10 - 6y$

A) Function; domain: all integers

B) Not a function; domain: all whole numbers

C) Not a function; domain: $(-\infty, \infty)$

D) Function; domain: $(-\infty, \infty)$

12) $y^2 = 3x$

A) Not a function; domain: $(-\infty, 0]$

B) Not a function; domain: $[0, \infty)$

C) Function; domain: $(-\infty, \infty)$

D) Function; domain: $(-\infty, 0]$

13) $y = \sqrt{6x - 4}$

A) Function; domain: $(-\infty, \infty)$

B) Not a function; domain: $\left[\frac{2}{3}, \infty\right)$

C) Not a function; domain: $\left(-\infty, \frac{2}{3}\right]$

D) Function; domain: $\left[\frac{2}{3}, \infty\right)$

14) $10x - 4y < 7$

A) Function; domain: $\left(-\infty, \frac{7}{4}\right)$

B) Not a function; domain: $(-\infty, \infty)$

C) Function; domain: $(-\infty, \infty)$

D) Not a function; domain: $\left(-\frac{7}{4}, \infty\right)$

Solve the problem.

15) Find f(1) when $f(x) = x^2 + 2x - 6$

A) 5 B) –7 C) 9 D) –3

16) Find f(k – 1) when $f(x) = 3x^2 + 3x + 7$

A) $3k^2 + 24k + 13$ B) $-3k^2 + 3k + 7$ C) $3k^2 - 3k + 7$ D) $3k^2 - 3k + 13$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

17) Find f(0) when $f(x) = x^2 - 2x - 4$

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

18) Find f(k) when $f(x) = 3x^2 + 4x + 5$

A) $9k^2 + 16k + 25$ B) $3k^2 + 16k + 5$ C) $3k^2 + 4k + 5$ D) $3k^2 + 4k + 25$

19) Find g(a + 1) when $g(x) = 3x + 1$.

A) $\frac{1}{3}a + 1$ B) $3a + 1$ C) $3a + 4$ D) $3a - 1$

20) It has been determined that the number of fish f(t) that can be caught in t minutes in a certain pond using a certain bait is $f(t) = .21t + 1$, for $t > 10$. Find the number of fish that can be caught if you fish for 27 minutes. Round your answer to the nearest whole number.

A) 31 B) 29 C) 14 D) 7

21) The mathematical model C(x) = 500x + 100,000 represents the cost in dollars a company has in manufacturing x items during a month. Based on this, how many items were produced if expenses were $250,000 in one month?

A) 500 items B) 300 items C) 200 items D) 100 items

The graphing calculator screen or screens provide information related to the linear function y = f(x). Use it to solve the problem.

22) What is the y-intercept of the line?

X	Y_1
0.00	7.00
1.00	10.00
2.00	13.00
3.00	16.00
4.00	19.00
5.00	22.00

X=3

A) 16 B) 3 C) 0 D) 7

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

23) The equation $y = x^2$ is satisfied by the points (2, 4) and (-2, 4). A horizontal line may be drawn between these two points. Is $y = x^2$ a function? Explain.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

24) If the ordered pair (4, 8) belongs to function g, then g(____) = ____.

A) y; 4 B) x; 8 C) 4; 8 D) 8; 4

25) If the ordered pair (5, 9) belongs to function g, then g(____) = ____.

A) x; 9 B) 9; 5 C) 5; 9 D) y; 5