Student's Name

Professor's Name

Course

Date

Functions in Mathematics

Introduction

According to Van Der Ven (110), a function in mathematics refers to a law governing a given relationship existing between one variable (the independent variable) and another (the dependent variable). This means that the relationship between a given input set and the possible outcomes or outputs is expressed, and that one input is related to a single output. Conventionally, the letter x represents inputs in a given relation, and the letter y normally represents the output. A function is expressed as$y = f(x)$.

A good example of a function is one that is linear, such as $y = 3x$, represented below; For example, when x = 2, y = 3*2, y =6.

X	y
1	3
2	6
3	9
4	12
5	15

Table 1: $y = 3x$ values

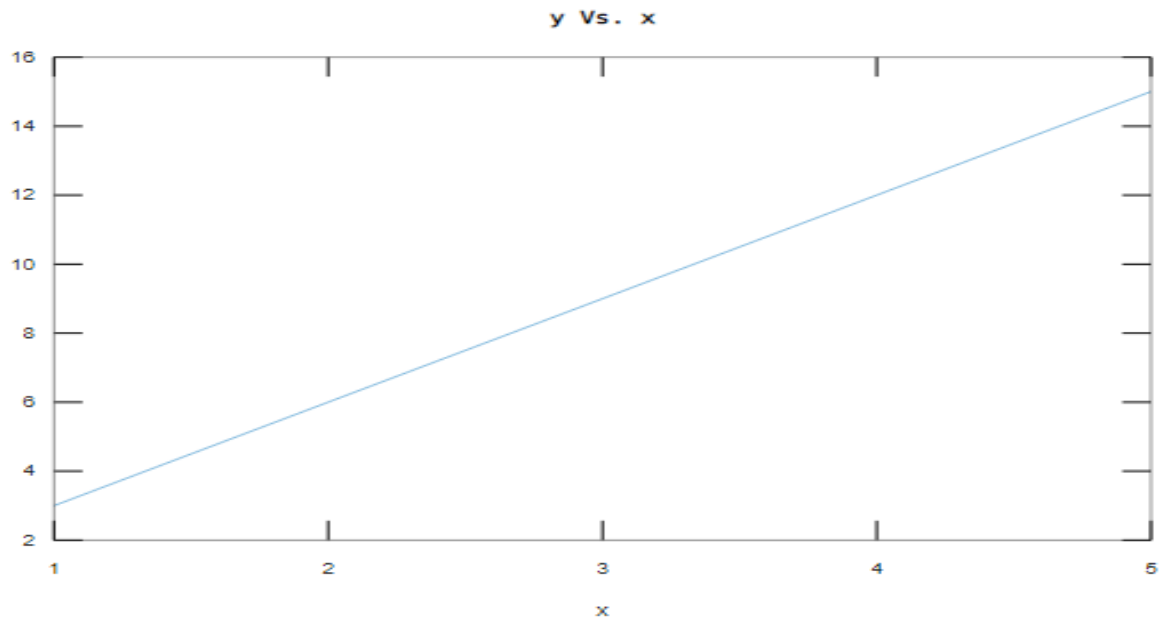

Image 1: A screenshot of the plot of y=3x in Matlab.

From the graph above, we can see that the function is linear from the straight line of the plot.

The code used is presented below:

```
x=1:1:5; %values of x from 1 to 5 with intervals of 1
y=3*x; % relation
plot (x,y); %plot graph of y vs. x
title ('y Vs. x'); %title of the graph
xlabel('x'); %labelling x-axis
ylabel ('y'); %labelling y-axis
```

Application in Real Life Situations

Functions are important in real-life situations. For example, a worker's wages in a factory can be calculated using a function (Markovits et al. 26). Since the wages (y) depend on the number of hours worked (x) and the hourly rate of, let's say, $50 per hour, the relation can be given as follows; $y = 50x$

For a worker who has done 6 hours, the wages will be:

$y = 50 * 6$

$y = \$300$

Works Cited

Markovits, Zvia, et al. “Functions Today and Yesterday.” *For the Learning of Mathematics*, vol. 6, no. 2, 28 June 1986, pp. 18–24.

Van der Ven, Sanne H., et al. “The Development of Executive Functions and Early Mathematics: A Dynamic Relationship.” *British Journal of Educational Psychology*, vol. 82, no. 1, 2011, pp. 100–119., doi:10.1111/j.2044-8279.2011.02035.x.