Linear Functions

Linear Function: a function whose graph is a slant line. It is in the form of $f(x) = mx + b$ or $y = mx + b$ where:

- y is the dependent variable;
- x is the independent variable which we manipulate to get different results of y;
- m is the slope of the line;
- b is the constant term or the y-intercept.

Practice Exercises

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = 5x + 1$					
$f(x) = 3x$					
$f(x) = -5x - 3$					
$f(x) = -(x + 5)$					
$f(x) = 10x^2 + 7x$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	1	2	3	4	5

2.

x	-2	-1	0	1	2
y	1	0	1	4	9

3.

x	-2	0	2	4	6
y	4	-2	-4	-2	4

4.

x	5	4	3	2	1
y	-1	2	5	8	11

5.

x	-2	-1	0	1	2
y	5	2	-1	-4	-7

Problem Set

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = -6x - 7$					
$f(x) = -4$					
$f(x) = 2(x - 3)$					
$f(x) = -4x^2$					
$f(x) = 3x^2 + 1$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	-3	-1	1	3	5

2.

x	1	2	3	4	5
y	4	1	0	1	4

3.

x	-2	-1	0	1	2
y	-1	2	5	8	11

4.

x	-5	-4	-3	-2	-1
y	15	11	7	3	-1

5.

x	-3	-1	1	3	5
y	-16	-6	4	14	24

Linear Functions

Linear Function: a function whose graph is a slant line. It is in the form of $f(x) = mx + b$ or $y = mx + b$ where:

- y is the dependent variable;
- x is the independent variable which we manipulate to get different results of y;
- m is the slope of the line;
- b is the constant term or the y-intercept.

Practice Exercises

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = 5x + 1$					
$f(x) = 3x$					
$f(x) = -5x - 3$					
$f(x) = -(x + 5)$					
$f(x) = 10x^2 + 7x$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	1	2	3	4	5

2.

x	-2	-1	0	1	2
y	1	0	1	4	9

3.

x	-2	0	2	4	6
y	4	-2	-4	-2	4

4.

x	5	4	3	2	1
y	-1	2	5	8	11

5.

x	-2	-1	0	1	2
y	5	2	-1	-4	-7

Problem Set

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = -6x - 7$					
$f(x) = -4$					
$f(x) = 2(x - 3)$					
$f(x) = -4x^2$					
$f(x) = 3x^2 + 1$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	-3	-1	1	3	5

2.

x	1	2	3	4	5
y	4	1	0	1	4

3.

x	-2	-1	0	1	2
y	-1	2	5	8	11

4.

x	-5	-4	-3	-2	-1
y	15	11	7	3	-1

5.

x	-3	-1	1	3	5
y	-16	-6	4	14	24

Linear Functions

Linear Function: a function whose graph is a slant line. It is in the form of $f(x) = mx + b$ or $y = mx + b$ where:

- y is the dependent variable;
- x is the independent variable which we manipulate to get different results of y;
- m is the slope of the line;
- b is the constant term or the y-intercept.

Practice Exercises

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = 5x + 1$					
$f(x) = 3x$					
$f(x) = -5x - 3$					
$f(x) = -(x + 5)$					
$f(x) = 10x^2 + 7x$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	1	2	3	4	5

2.

x	-2	-1	0	1	2
y	1	0	1	4	9

3.

x	-2	0	2	4	6
y	4	-2	-4	-2	4

4.

x	5	4	3	2	1
y	-1	2	5	8	11

5.

x	-2	-1	0	1	2
y	5	2	-1	-4	-7

Problem Set

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = -6x - 7$					
$f(x) = -4$					
$f(x) = 2(x - 3)$					
$f(x) = -4x^2$					
$f(x) = 3x^2 + 1$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	-3	-1	1	3	5

2.

x	1	2	3	4	5
y	4	1	0	1	4

3.

x	-2	-1	0	1	2
y	-1	2	5	8	11

4.

x	-5	-4	-3	-2	-1
y	15	11	7	3	-1

5.

x	-3	-1	1	3	5
y	-16	-6	4	14	24

Linear Functions

Linear Function: a function whose graph is a slant line. It is in the form of $f(x) = mx + b$ or $y = mx + b$ where:

- y is the dependent variable;
- x is the independent variable which we manipulate to get different results of y;
- m is the slope of the line;
- b is the constant term or the y-intercept.

Practice Exercises

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = 5x + 1$					
$f(x) = 3x$					
$f(x) = -5x - 3$					
$f(x) = -(x + 5)$					
$f(x) = 10x^2 + 7x$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	1	2	3	4	5

2.

x	-2	-1	0	1	2
y	1	0	1	4	9

3.

x	-2	0	2	4	6
y	4	-2	-4	-2	4

4.

x	5	4	3	2	1
y	-1	2	5	8	11

5.

x	-2	-1	0	1	2
y	5	2	-1	-4	-7

Problem Set

A. Fill out the following table. Check *Yes* if the function is a linear function or *No* if it is not.

Function	Degree	Yes	No	m	b
$f(x) = -6x - 7$					
$f(x) = -4$					
$f(x) = 2(x - 3)$					
$f(x) = -4x^2$					
$f(x) = 3x^2 + 1$					

B. Determine whether each function is linear given the table.

1.

x	-2	-1	0	1	2
y	-3	-1	1	3	5

2.

x	1	2	3	4	5
y	4	1	0	1	4

3.

x	-2	-1	0	1	2
y	-1	2	5	8	11

4.

x	-5	-4	-3	-2	-1
y	15	11	7	3	-1

5.

x	-3	-1	1	3	5
y	-16	-6	4	14	24