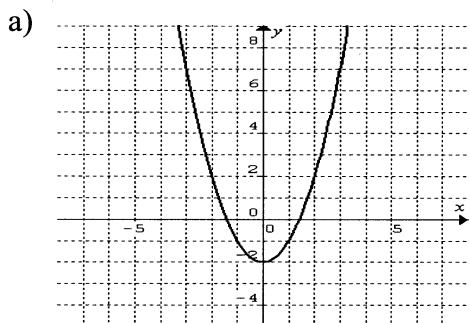


Name: _____

1. Fill in the blanks.

- a) The x coordinate of the point $(-1, -5)$ is _____.
- b) The point $(-6, 4)$ lies in quadrant _____.
- c) The point $(0, 0)$ is called the _____.
- d) The point $(7, 0)$ lies on the _____ axis.

2. State whether each is linear or non-linear.



b) $y = x^2 - 9$

c) $y = 6x - 7$

3. a) Complete the following tables for Finite Differences.

b) State the type of relation. (Linear or Non-linear)

i)

x	y	Difference in y -values
-1	-3	
0	1	
1	5	
2	9	

ii)

x	y	Difference in y -values
0	0	
1	2	
2	8	
3	18	

Type of Relation: _____

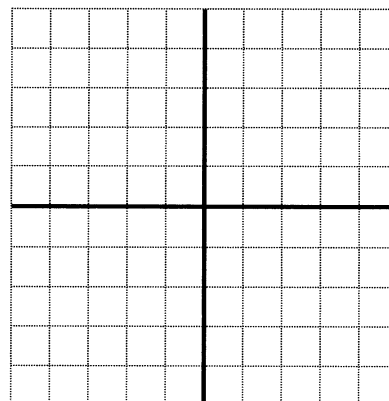
Type of Relation: _____

7. i) Complete the table of values. Show your work beside the table

ii) Graph on the grid provided. **Label your graph fully.**

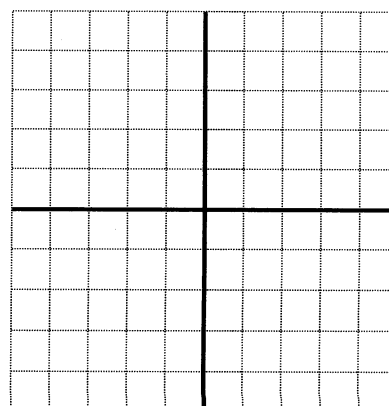
$y = -3x + 2$

x	y



$y = x^2 - 2$

x	y
2	
1	
0	
-1	
-2	

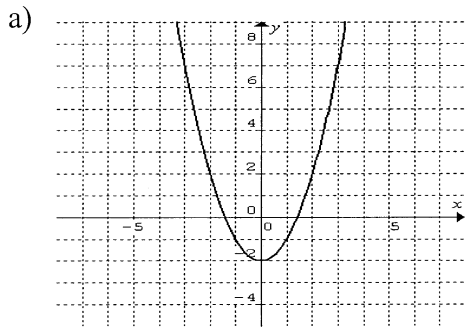


RELATIONS

1. Fill in the blanks.

- a) The x coordinate of the point $(-1, -5)$ is -1.
- b) The point $(-6, 4)$ lies in quadrant II.
- c) The point $(0, 0)$ is called the Origin.
- d) The point $(7, 0)$ lies on the x axis.

2. State whether each is linear or non-linear.



Non-Linear

b) $y = x^2 - 9$

Non-Linear

c) $y = 6x - 7$

Linear

3. a) Complete the following tables for Finite Differences.

b) State the type of relation. (Linear or Non-linear)

i)

x	y	Difference in y-values
-1	-3	4
0	1	4
1	5	4
2	9	4

Type of Relation: Linear

ii)

x	y	Difference in y-values
0	0	2
1	2	6
2	8	10
3	18	18

Type of Relation: Non-Linear

7. i) Complete the table of values.

ii) Graph on the grid provided. *Label your graph fully.*

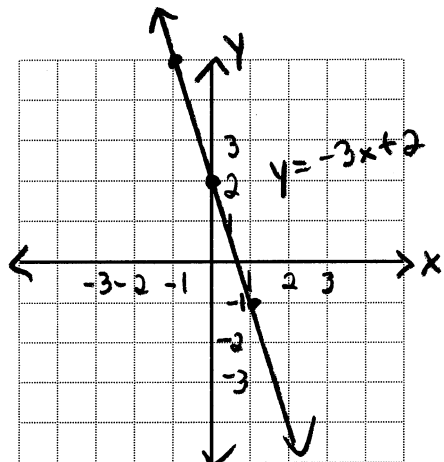
$y = -3x + 2$

x	y
-1	5
0	2
1	-1

$\rightarrow y = -3(-1) + 2$
 $= 3 + 2 = 5$

$\rightarrow y = -3(0) + 2$
 $= 0 + 2 = 2$

$\rightarrow y = -3(1) + 2$
 $= -3 + 2 = -1$



$y = x^2 - 2$

x	y
2	2
1	-1
0	-2
-1	-1
-2	2

$\rightarrow y = (2)^2 - 2 = 4 - 2 = 2$

$\rightarrow y = (1)^2 - 2 = 1 - 2 = -1$

$\rightarrow y = (0)^2 - 2 = 0 - 2 = -2$

$\rightarrow y = (-1)^2 - 2 = 1 - 2 = -1$

$\rightarrow y = (-2)^2 - 2 = 4 - 2 = 2$

