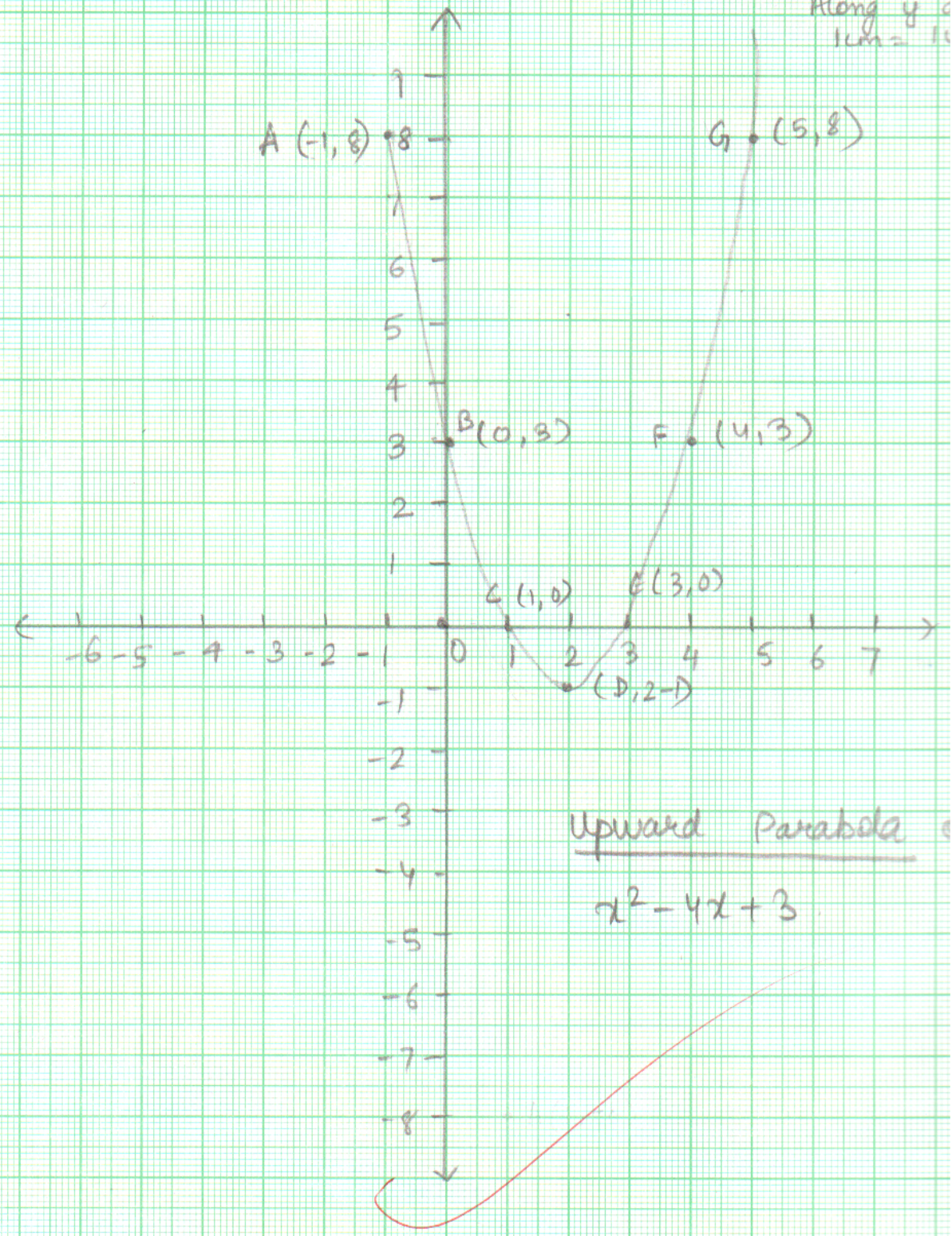
Scale
Along x a
1cm = 1
Along y a
1cm = 1



EXPERIMENT NO. 2

AIM :

To verify the zeroes of a given quadratic polynomial graphically.

OBJECTIVE :

To verify graphically that $x = 1$, $x = 3$ are the two real zeroes of the quadratic polynomial $x^2 - 4x + 3$.

PRE-REQUISITE KNOWLEDGE :

Graph of a quadratic polynomial $ax^2 + bx + c$ is an upward parabola when $a > 0$. If the graph meets the x axis at 2 distant points given by $x = \alpha$ and $x = \beta$, the α and β are the two real zeroes of the quadratic polynomial.

MATERIALS REQUIRED :

1 sheet of graph paper, coloured ball point pen.

PROCEDURE :

Write $y = x^2 - 4x + 3$

Make a table of values as shown :

x	-1	0	1	2	3	4	5
y	8	3	0	-1	0	3	8

lot the points A $(-1, 8)$, B $(0, 3)$, C $(1, 0)$, D $2, -1)$, E $(3, 0)$, F $(5, 8)$ on the graph paper.

ain the above points with a free hand curve which an upward parabola which is the graph of above olynomial.

BSERVATION :

e observe that graph meets x axis at $x = 1$, $= 0$ and $x = 3$, $y = 0$

ONCLUSION :

$= 1$, $x = 3$ are true real zeroes of the olynomial $x^2 - 4x + 3$.