

- ① Arithmetic
  - Ratio
  - VAT
- ② Sets
  - SDT
  - Venn Diagrams
  - Symbols
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- ③ Algebra
  - Factors
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  - Grouping
  - Quadratic
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- ④ Functions
  - graph
  - read the graph.

Functions  
Paper 1 Q 15 2014

a)  $h: x \mapsto 4x-3$  where  $x \in \mathbb{R}$ . Find

$h(x) = 4x-3$   
 $y = 4x-3$   
 $m = 4$  slope  
 $c = (0, -3)$

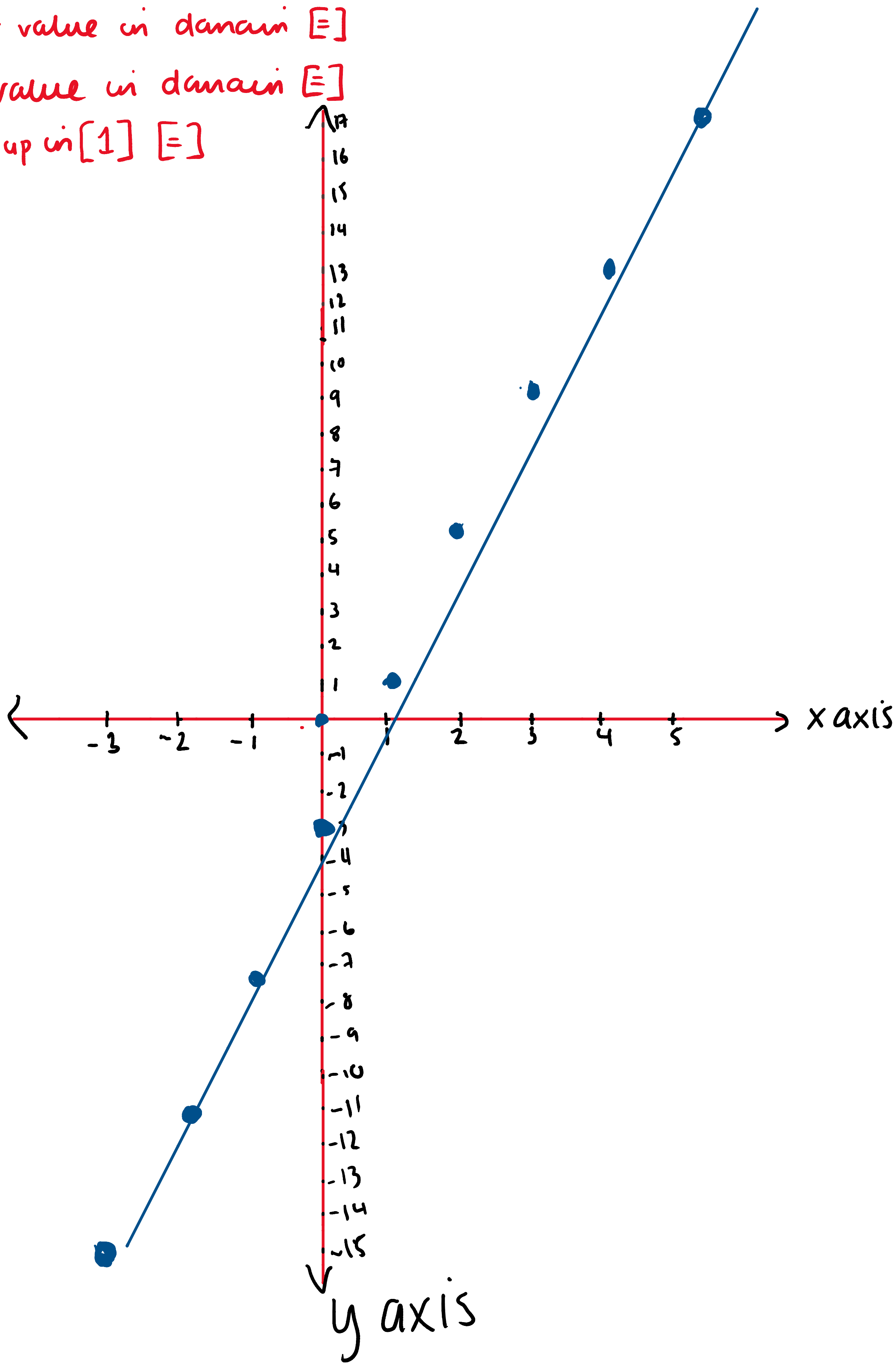
$h(5) \mapsto 4(5)-3$   
 $20-3$   
 $= 17$        $(5, 17)$

$h(0) \mapsto 4(0)-3$   
 $0-3$   
 $= -3$        $(0, -3)$  y intercept

Graph  $h: x \mapsto 4x-3$  in the domain  $-3 \leq x \leq 5$   $\leftarrow$  x axis

Make a table

- ① Mode
- ② [3]
- ③ f(x) input function [4] [ALPHA] [5] [=] [3]
- ④ [=]
- ⑤ Start first value in domain [=]
- ⑥ End last value in domain [=]
- ⑦ Step - go up in [1] [=]



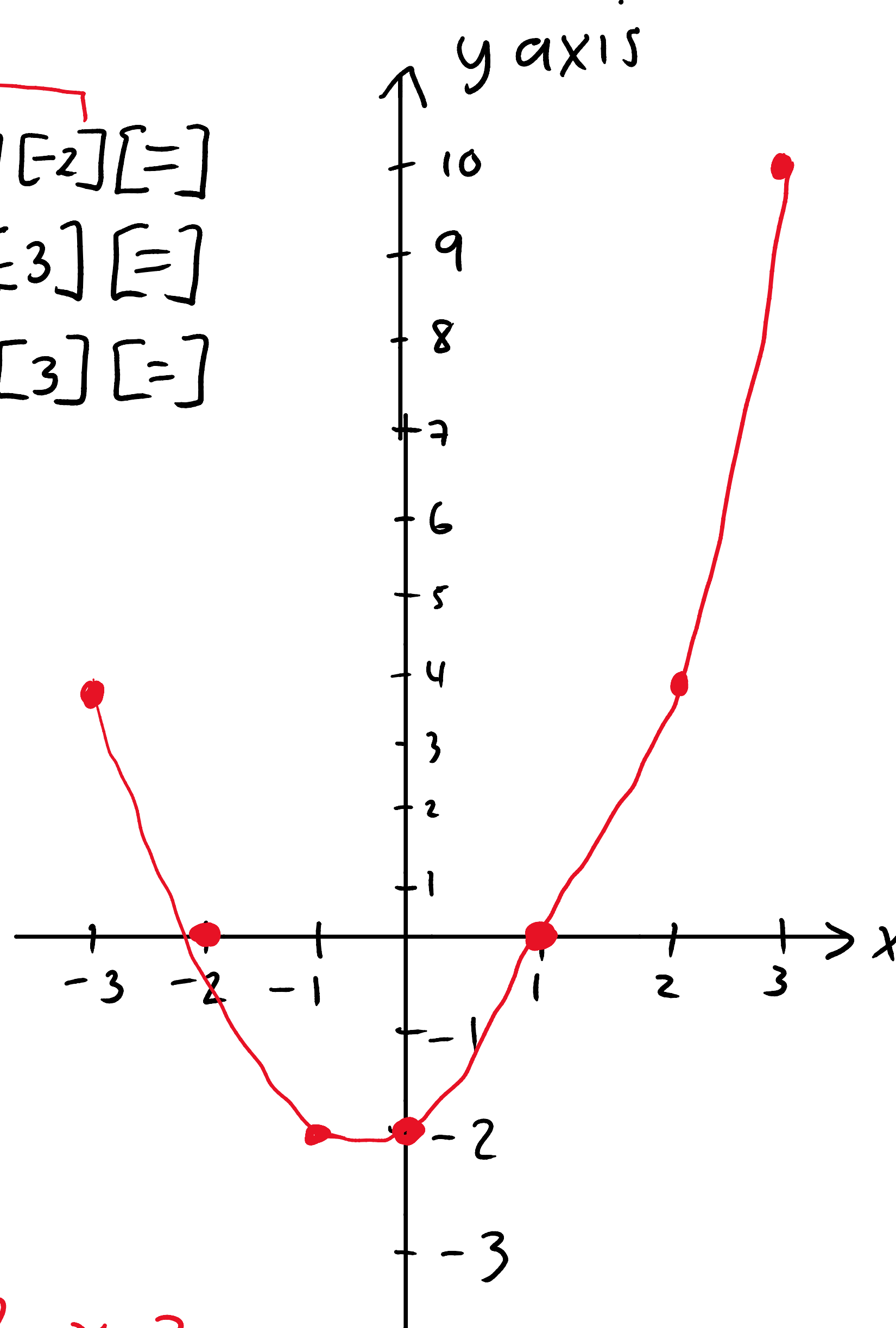
Table

x	y	Point (x, y)
-3	-15	(-3, -15)
-2	-11	(-2, -11)
-1	-7	(-1, -7)
0	-3	(0, -3)
1	1	(1, 1)
2	5	(2, 5)
3	9	(3, 9)
4	13	(4, 13)
5	17	(5, 17)

Graph the Quadratic function  
 $f(x) = x^2 + x - 2$  in the domain  $-3 \leq x \leq 3$

- ① Mode
- ② 3
- ③ f(x) = [ALPHA] [x] [x^2] [+] [ALPHA] [2] [-2] [=]
- ④ Start (first value in the domain) [3] [=]
- ⑤ End (last value in the domain) [3] [=]
- ⑥ Step? [1] [=]

x	f(x)	Coor. Point (x, y)
-3	4	(-3, 4)
-2	0	(-2, 0)
-1	-2	(-1, -2)
0	-2	(0, -2)
1	0	(1, 0)
2	4	(2, 4)
3	10	(3, 10)



Q1) Graph the function  $f(x) = 2x^2 - x - 3$   
in the domain  $-2 \leq x \leq 3$