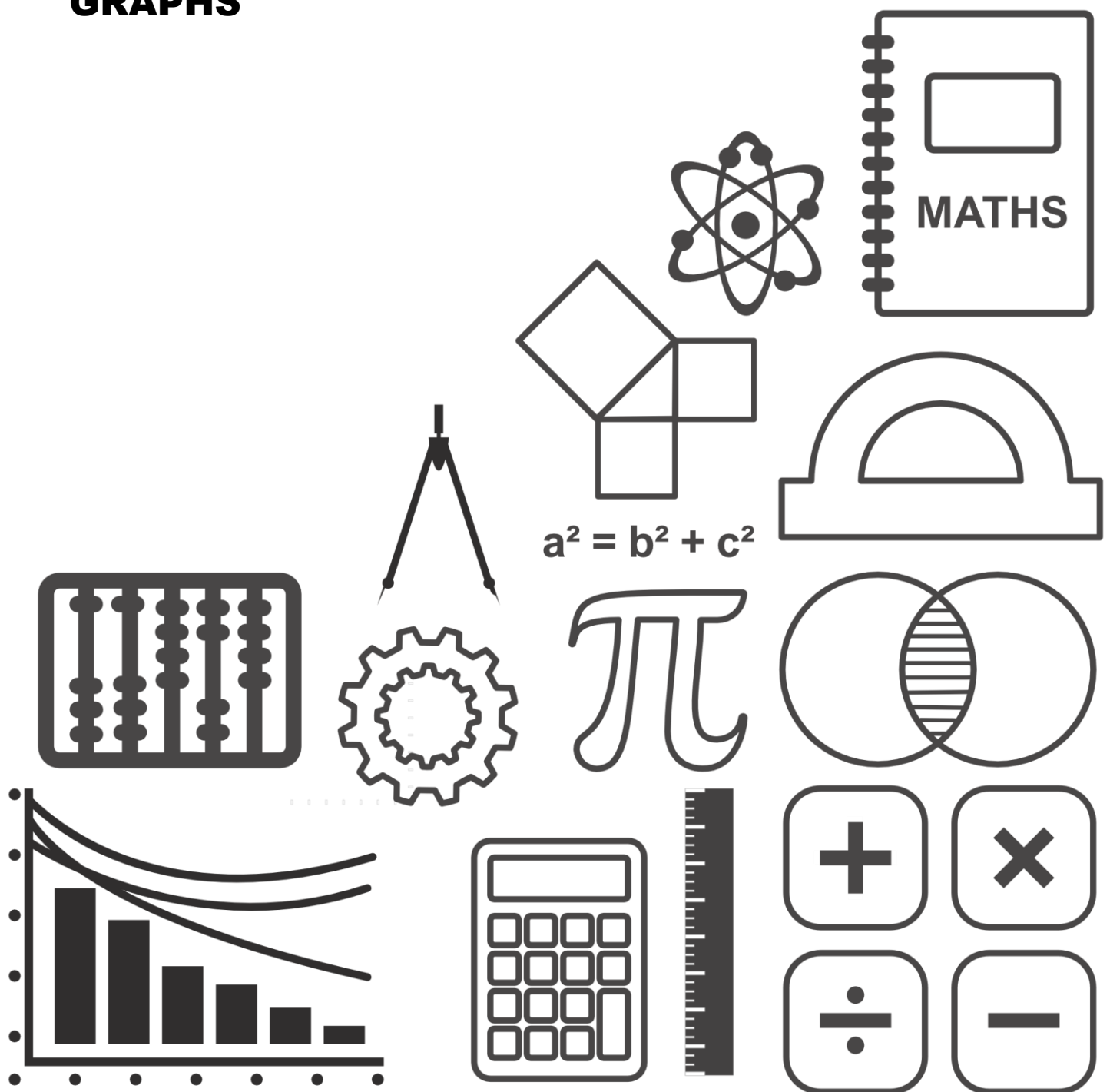


GCSE TOPIC BOOKLET GRAPHS



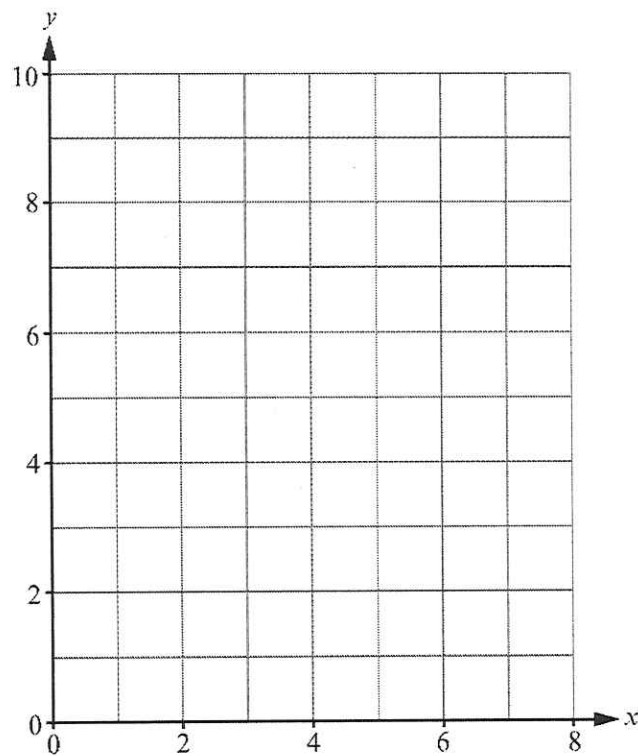
1.

(a) Use the grid below to draw graphs to represent each of the following equations.

(i) $y = \frac{1}{2}x + 6$

(ii) $x + y = 8$

Label your lines (i) and (ii) as appropriate.



[4]

(b) Using your answer to (a), are the lines $y = \frac{1}{2}x + 6$ and $x + y = 8$ perpendicular to each other?

Give a reason for your answer.

[1]

2.

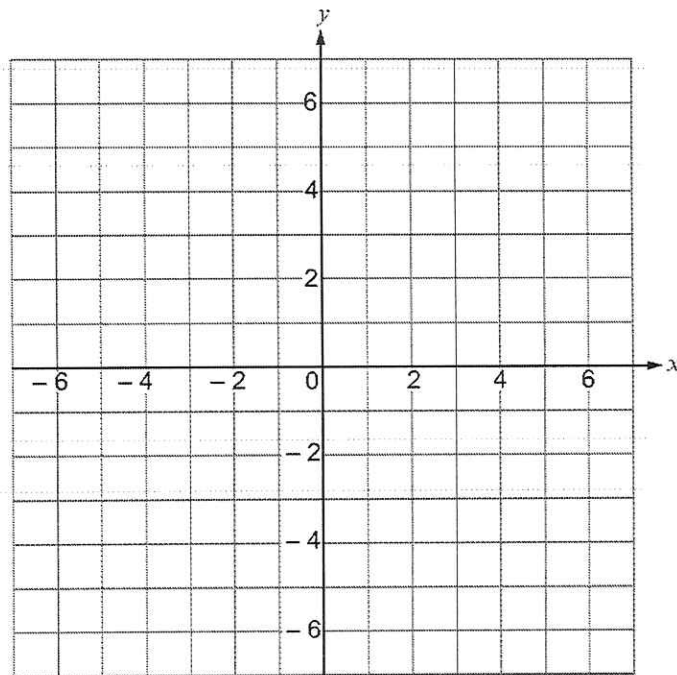
Points are plotted on a grid.
The rule $(a, 3a)$ is used to find all the points.

- (a) Does the point with coordinates $(-5, -2)$ fit the rule?
You must give a reason for your answer.

[1]

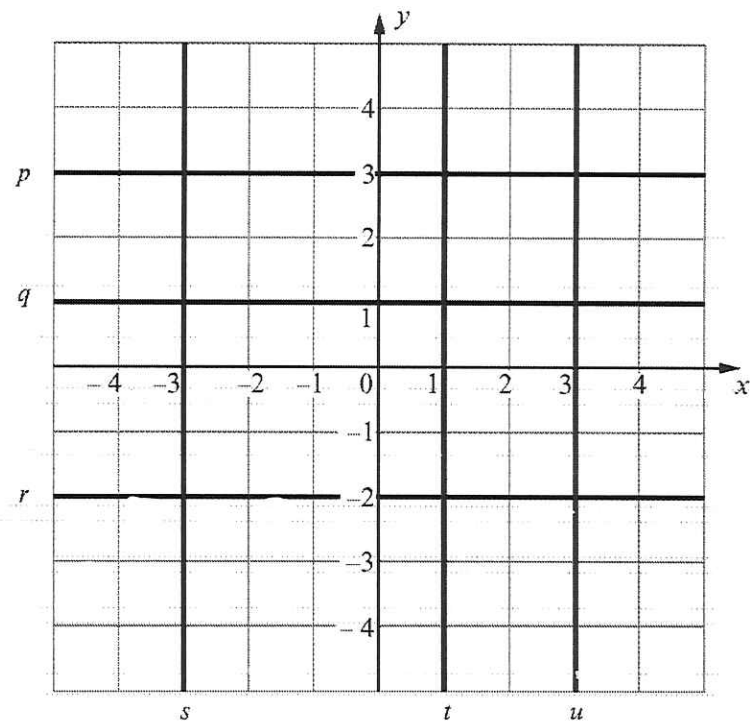
- (b) Plot five possible points with coordinates that fit the rule $(a, 3a)$ on the grid.

[2]



3.

As part of her homework, Nia was asked to identify straight lines drawn on the coordinate grid shown below.



(a) Which of the lines p , q , r , s , t or u shown on the grid represent the following equations?

$y = 1$ is line

$x = -3$ is line

[2]

(b) Nia was also asked to draw the line $y = 2x - 1$.

(i) Complete the table below for this line.

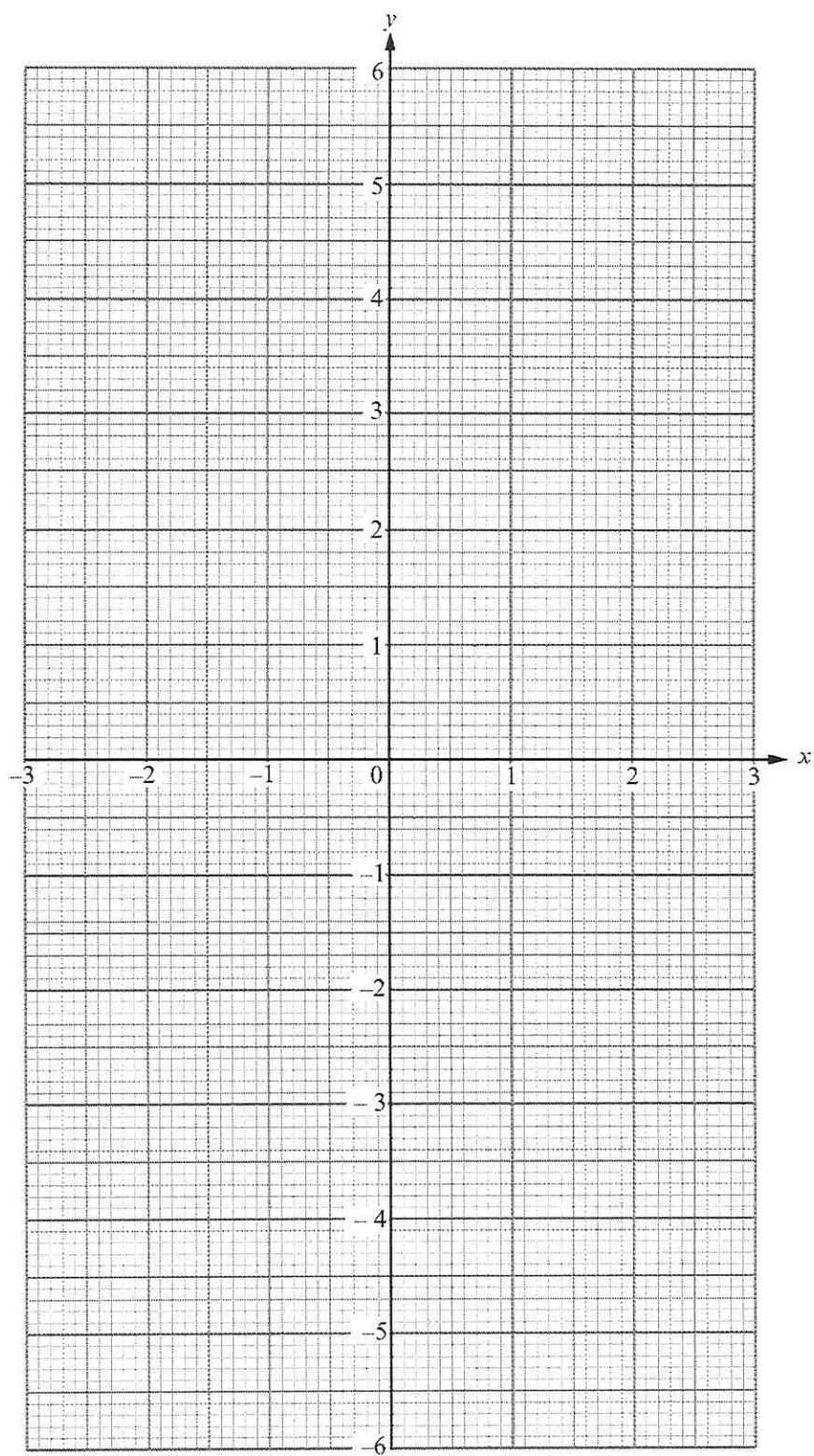
x	-2	-1	0	1	2	3
$y = 2x - 1$	-5		-1	1		5

.....

 [2]

(ii) On the graph paper on the opposite page, draw the graph of $y = 2x - 1$.

[2]



The table shows some of the values of $y = x^2 - 4$ for values of x from -2 to 3 .

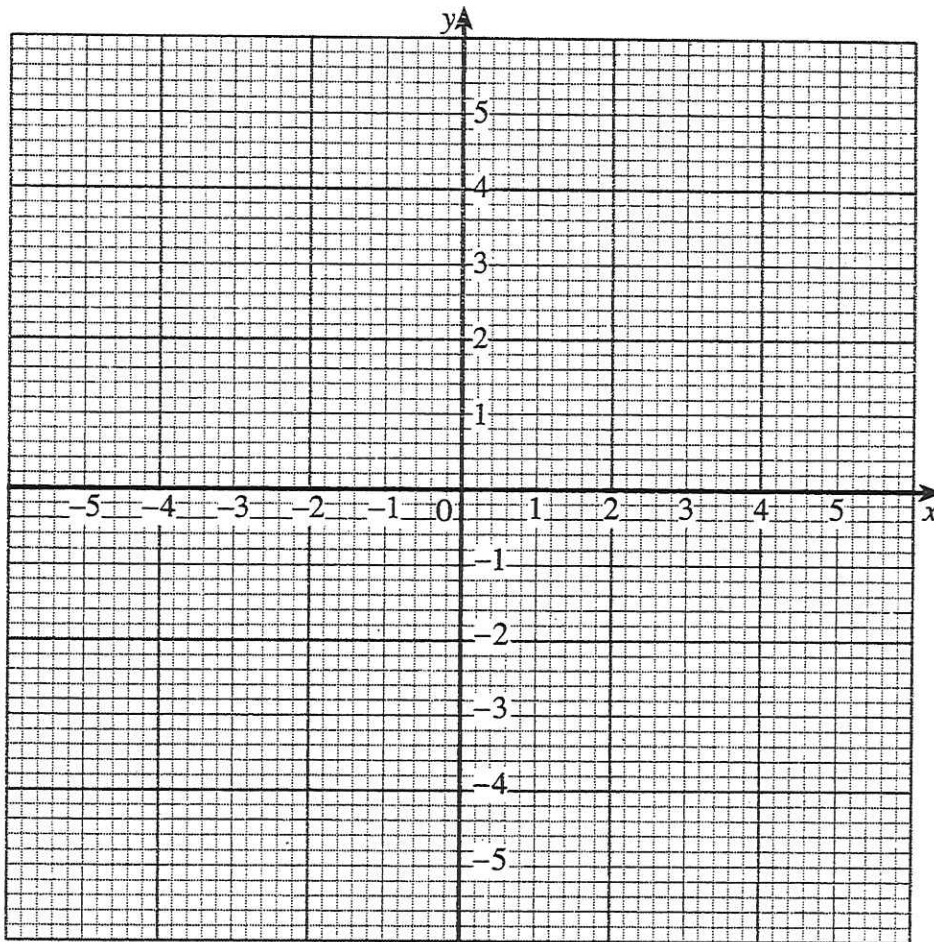
- (a) Complete the table by finding the value of y for $x = -1$.

x	-2	-1	0	1	2	3
$y = x^2 - 4$	0		-4	-3	0	5

[1]

- (b) On the graph paper below, draw the graph of $y = x^2 - 4$ for values of x between -2 and 3 .

[2]



5.

The table shows the value of $y = 2x - 1$ for $x = 2$.

x	0	2	4
y		3	

- (i) Complete the table for y when $x = 0$ and $x = 4$.

[1]

.....

.....

.....

- (ii) On the grid below, draw the graph of $y = 2x - 1$ for values of x from $x = 0$ to $x = 4$.

[3]

