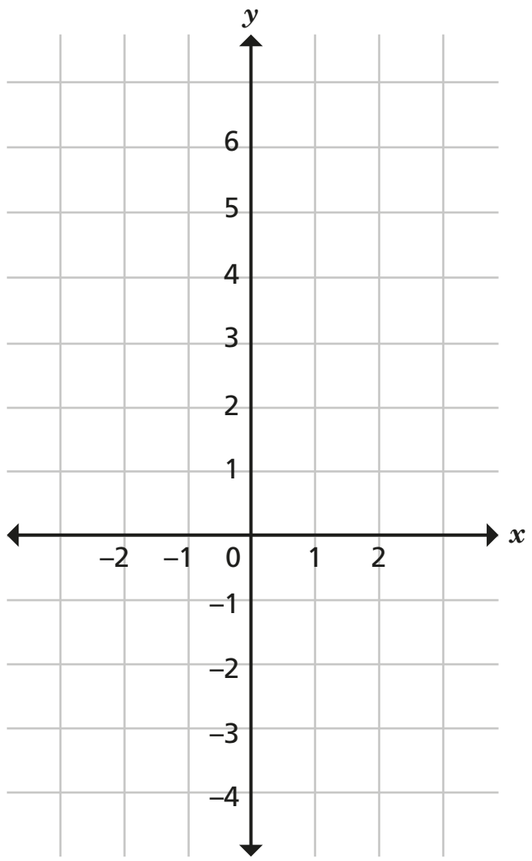
Plot graphs of the form $y = mx + c$

1 **a)** Complete the table of values for $y = 2x + 1$

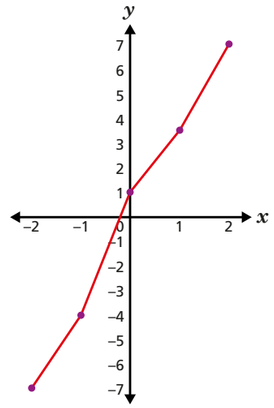
x	–2	–1	0	1	2
y					

b) Draw the graph of $y = 2x + 1$ for values of x from $x = –2$ to $x = 2$



2 Annie is plotting the graph of the line $y = 3x + 1$
Here is her coordinate table and graph.

x	–2	–1	0	1	2
y	–7	–4	1	4	7

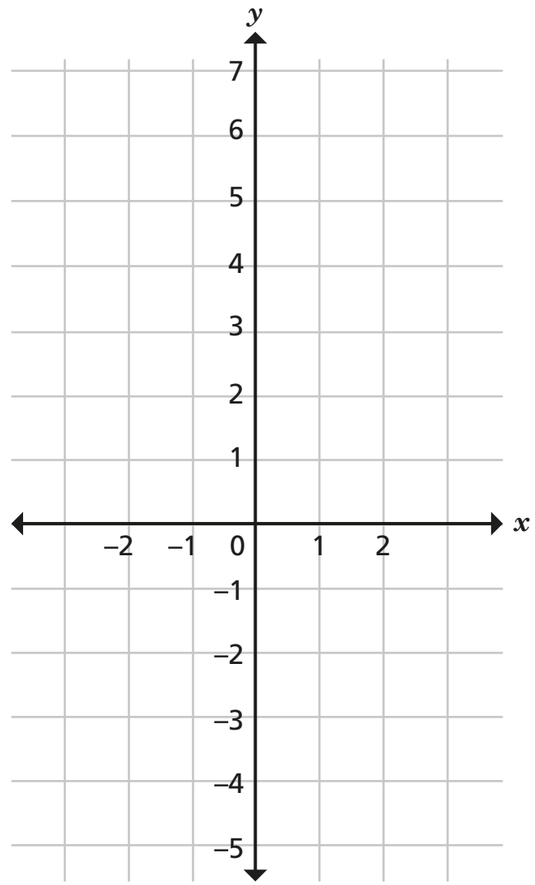


a) How can Annie tell from her graph that she is wrong?

b) Complete the coordinate table correctly.

x	–2	–1	0	1	2
y					

c) Correctly draw the line $y = 3x + 1$



3 Here are three tables of values for the lines P, Q and R.

a) Complete the tables.

P $y = 3x + 4$

x	–2	–1	0	1	2
y					

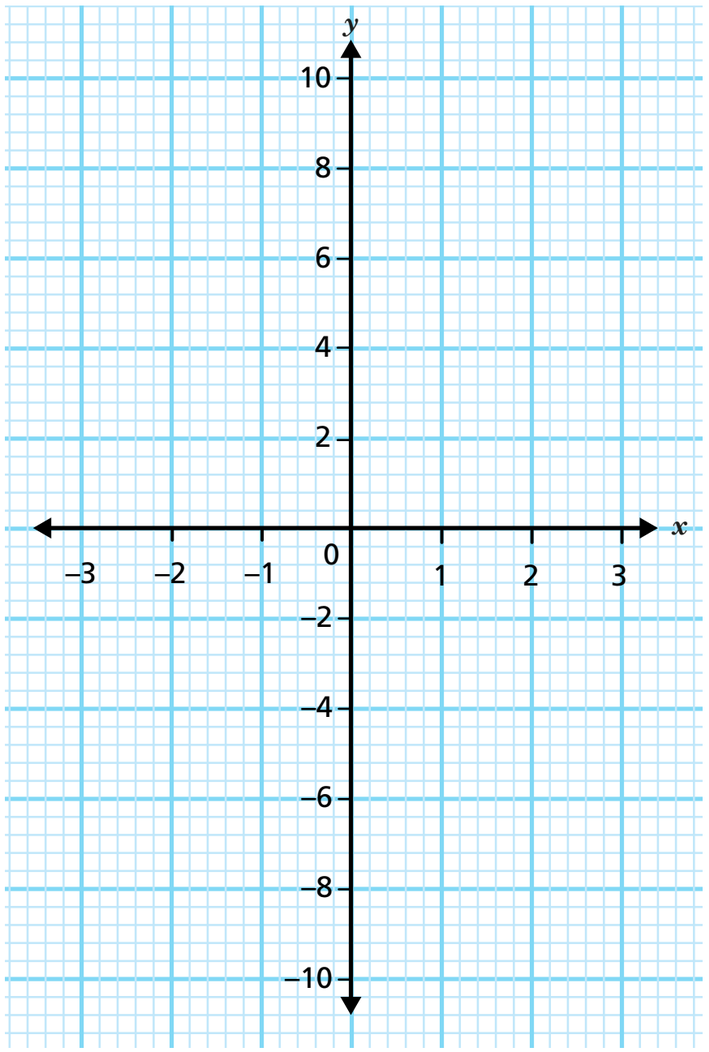
Q $y = -x + 2$

x	–2	–1	0	1	2
y					

R $y = 0.5x - 3$

x	–2	–1	0	1	2
y					

b) Plot and label lines P, Q and R.



c) Write the coordinates of a point that is not on any of the lines.

(☐ , ☐)

d) Write the coordinates of a point that is on two of the lines.

(☐ , ☐)

e) Which line is parallel to $y = \frac{1}{2}x$? _____

4 A line passes through the points A(0, 6) and B(2, 0).

a) Draw a sketch to help find the equation of the line.

$y =$ _____

Another line passes through A and the point C(–2, 0).

b) What is the same and what is different about the two lines?

_____

_____

c) Find the equation of the new line.

$y =$ _____