

Plot straight line graphs

R

1 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					

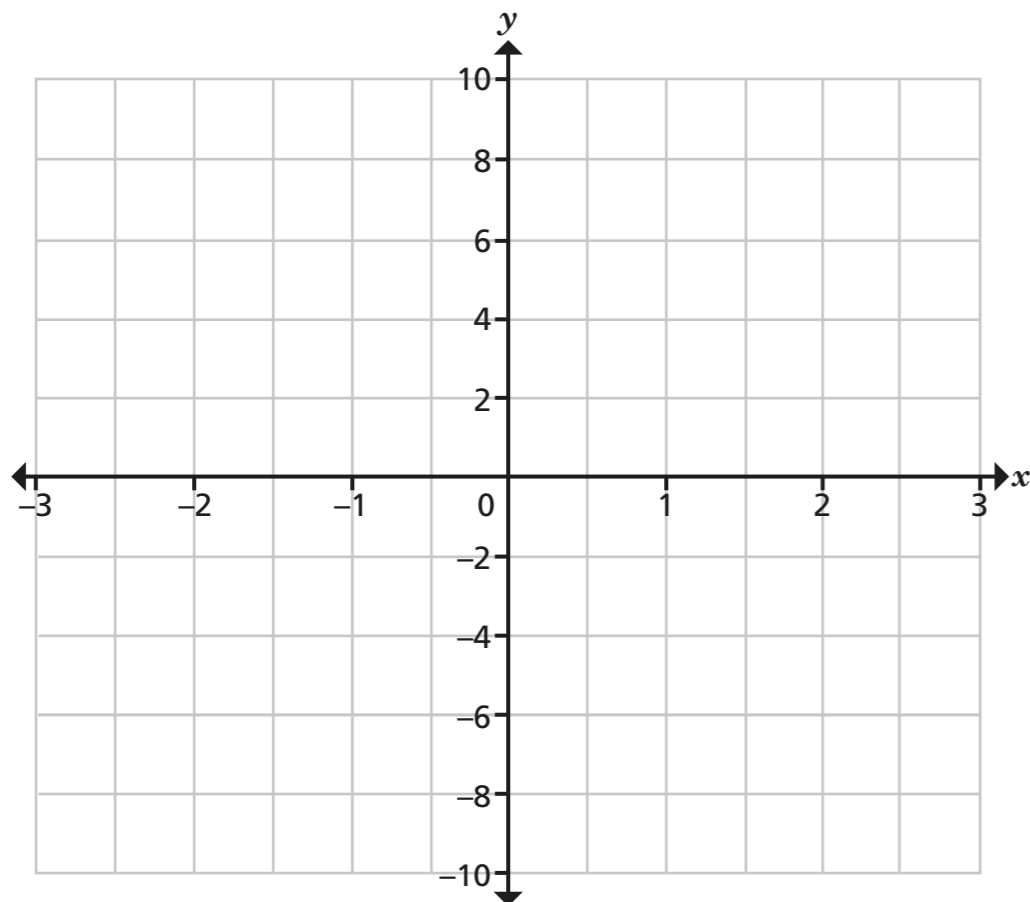
Q $y = -x + 2$

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.



2 a) Complete the tables of values for the four lines: L_1 , L_2 , L_3 and L_4

L_1 $y = 4x + 3$

x	-2	-1	0	1	2
y					

L_3 $y = 3 - 4x$

x	-2	-1	0	1	2
y					

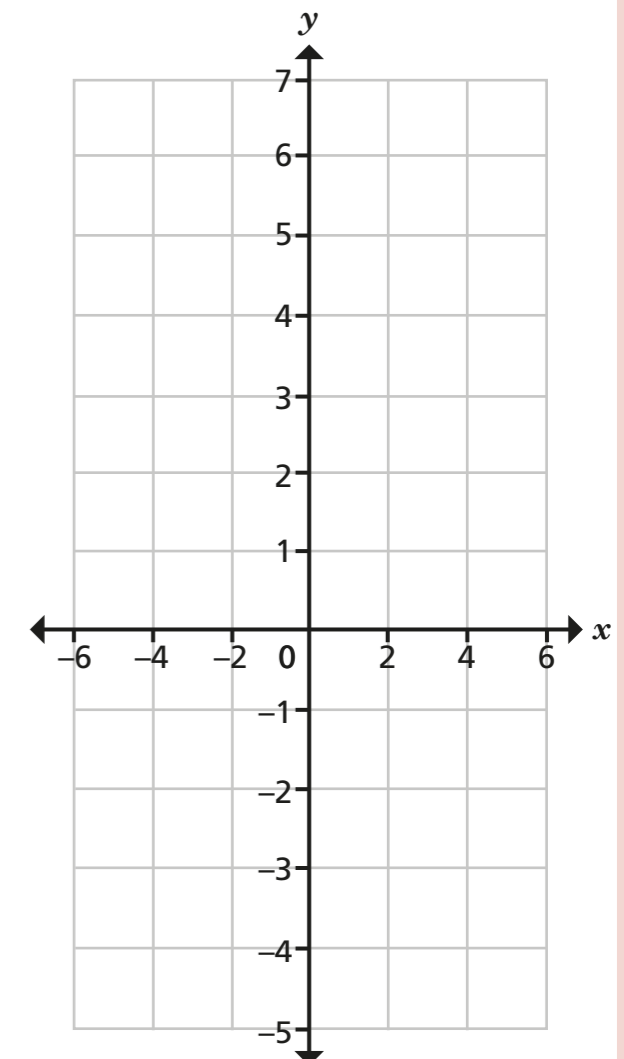
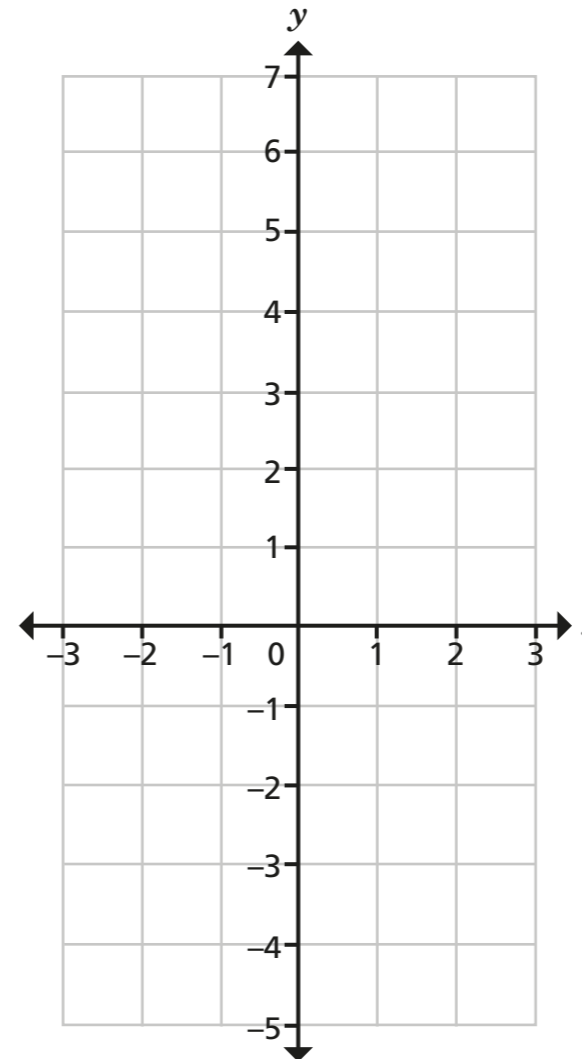
L_2 $y = 4x - 3$

x	-2	-1	0	1	2
y					

L_4 $y = -3 - 4x$

x	-2	-1	0	1	2
y					

b) Plot and label the lines on both coordinate grids.



What is the same? What is different?

Discuss it with a partner.

3 a) Complete the tables of values for the four lines: J, K, L and M.

J $y = 5x + 2$

x	-2	-1	0	1	2
y					

L $y = 2 - x$

x	-2	-1	0	1	2
y					

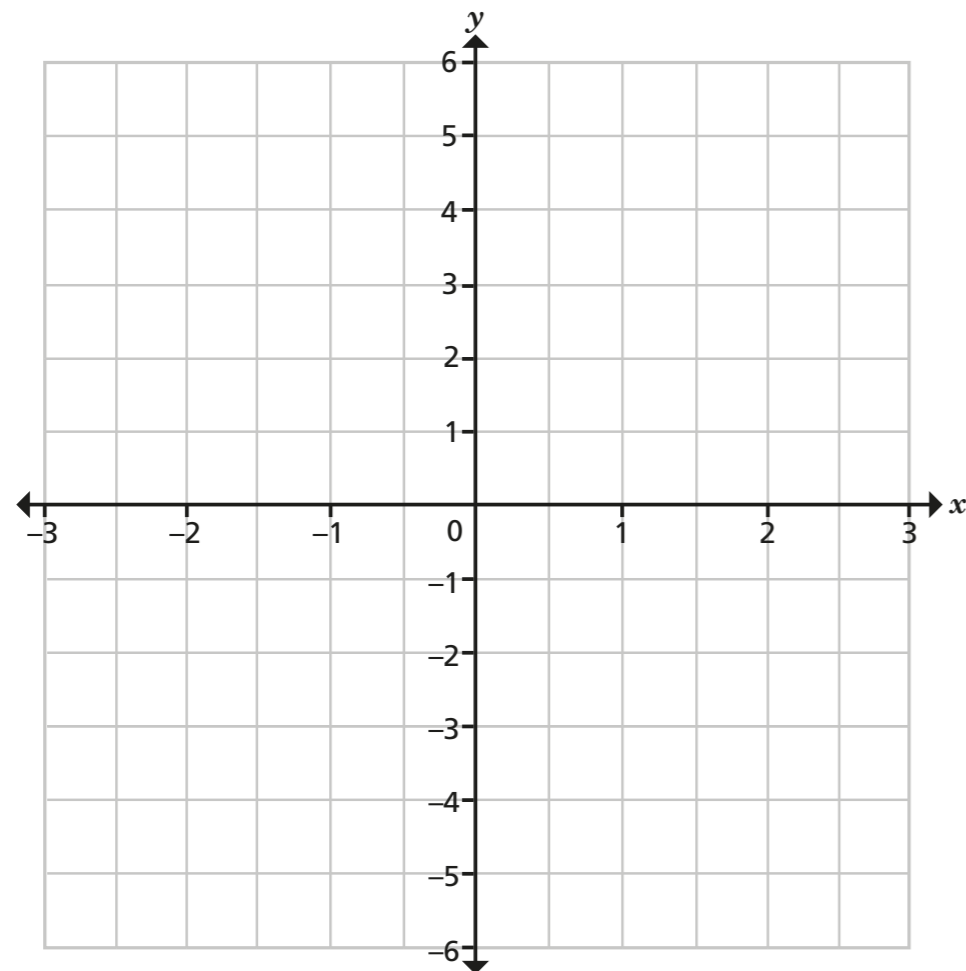
K $2 + 3x = y$

x	-2	-1	0	1	2
y					

M $y = -4x + 2$

x	-2	-1	0	1	2
y					

b) Plot and label the lines.



c) Look at the sequence formed by the y-values for each line.

What do you notice?

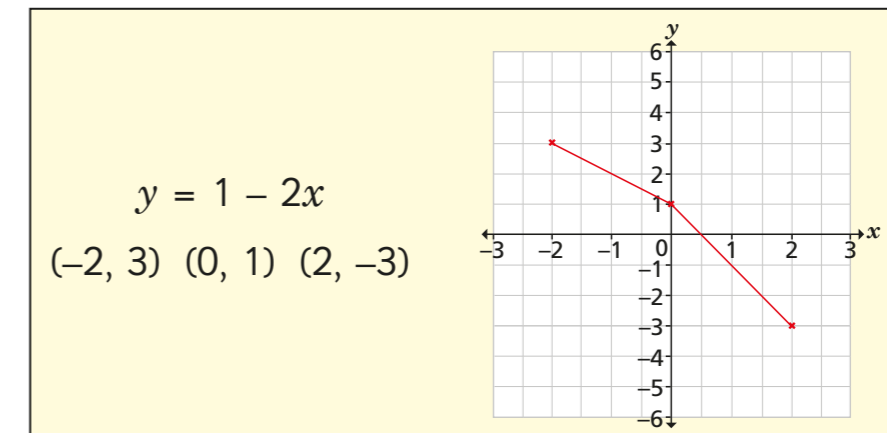
d) All the lines have exactly one point in common.

What are the coordinates of this point?

(,)

Why does this happen?

4 Tommy has worked out the coordinates of three points on the line $y = 1 - 2x$ and used them to draw the graph of $y = 1 - 2x$.



How can you tell by looking at the graph that Tommy must have made a mistake?

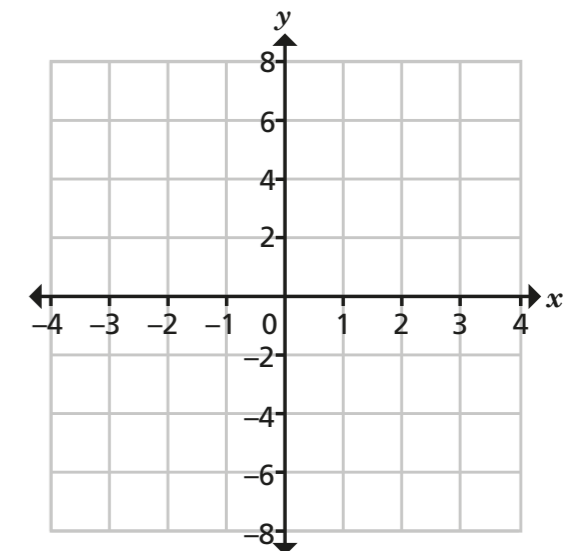
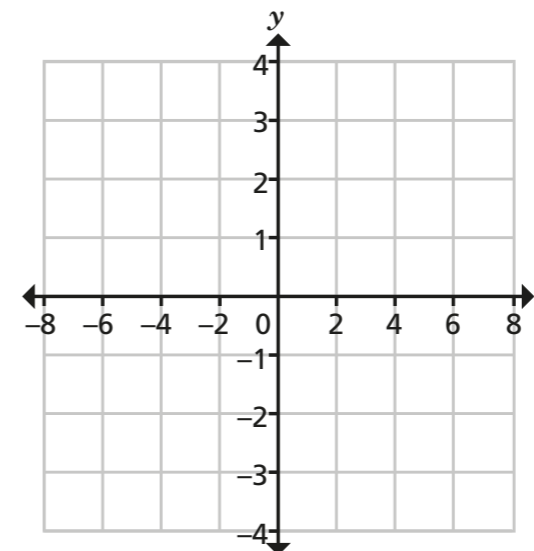
5 a) Work out the coordinates of three points on the lines T, U and V.

T $y = 2x - 5$

U $3 - x = y$

V $y = 4 + 3x$

b) Draw and label the lines on both coordinate grids.



What is the same? What is different?