

Equations of parallel lines

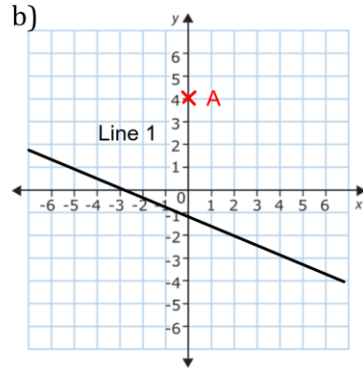
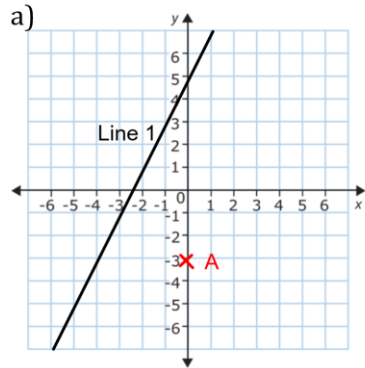
Question 1: Write down the equation of a line parallel to each of the following

- (a) $y = 2x + 3$ (b) $y = 5x - 3$ (c) $y = -3x + 1$ (d) $y = x - 7$

Question 2: Write down the equation of each of the following lines

- (a) Parallel to $y = 3x + 5$ and passing through $(0, 2)$
 (b) Parallel to $y = 4x - 1$ and passing through $(0, 6)$
 (c) Parallel to $y = 5x$ and passing through $(0, -3)$

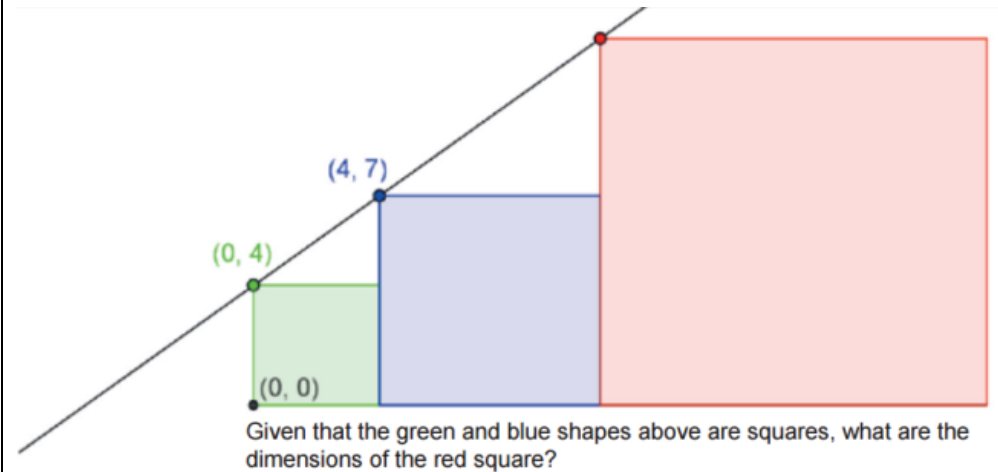
Question 3: Write down the equation of the line parallel to Line 1 and passing through A.



Question 4: Write down the equation of each of the following lines

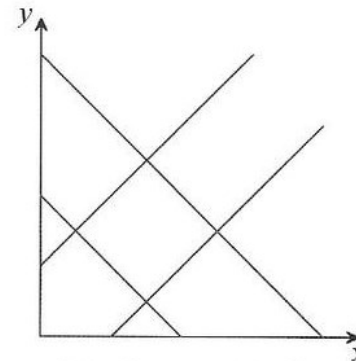
- (a) Parallel to $y = 2x - 1$ and passing through $(1, 8)$
 (b) Parallel to $y = 3x + 2$ and passing through $(1, 1)$
 (c) Parallel to $y = 5x - 4$ and passing through $(2, 9)$
 (d) Parallel to $y = 3x - 7$ and passing through $(4, 15)$
 (e) Parallel to $y = 4x$ and passing through $(-1, 3)$
 (f) Parallel to $y = -2x + 5$ and passing through $(-3, 0)$

Extension 1:



Extension 2:

FOUR LINES TO MAKE A SQUARE



The equations of the four straight lines are

$$x + y = 4, \quad x + y = 8, \quad y = x + 2 \quad \text{and} \quad y = x - 2.$$

Find the area of the square and the coordinates of each of its vertices.

Extension 3:

Which is bigger, $n + 10$, or $2n + 3$?

How did you decide?

