Name: _____

GCSE (1 – 9)

The Equation of a Line

Instructions

• Use **black** ink or ball-point pen.
• Answer all questions.
• Answer the questions in the spaces provided
– *there may be more space than you need.*
• Diagrams are **NOT** accurately drawn, unless otherwise indicated.
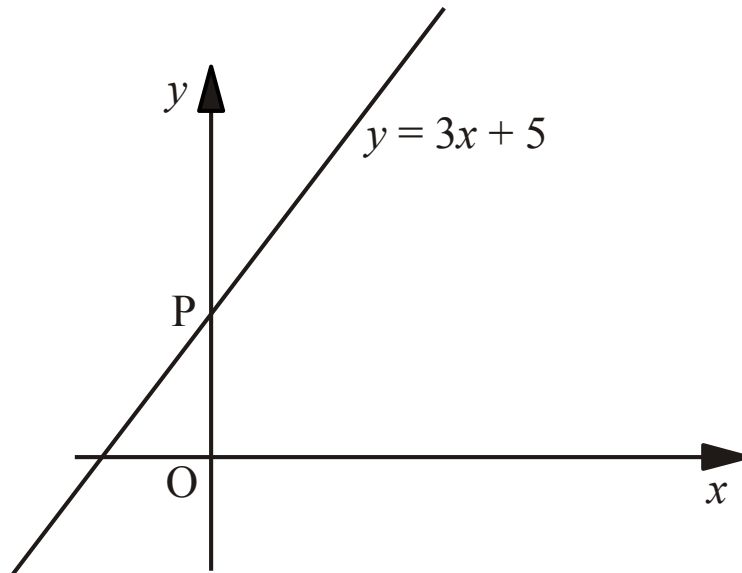• You must **show all your working out.**

Information

• The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

• Read each question carefully before you start to answer it.
• Keep an eye on the time.
• Try to answer every question.
• Check your answers if you have time at the end

1.

(a) The line $y = 3x + 5$ crosses the y axis at P.
What is the value of y at P?

.... (1)

(b) Write down the equation of another line which
is parallel to $y = 3x + 5$

.... (1)

2. A line passes through the point (0, 4).
The gradient of this line is 2.
Write down the equation of this line.

.... (2)

3. A straight line has equation $y = 5 - 3x$

(a) Write down the gradient of the line.

.... (1)

(b) Write down the coordinates of the point where the line crosses the y axis.

.... (1)
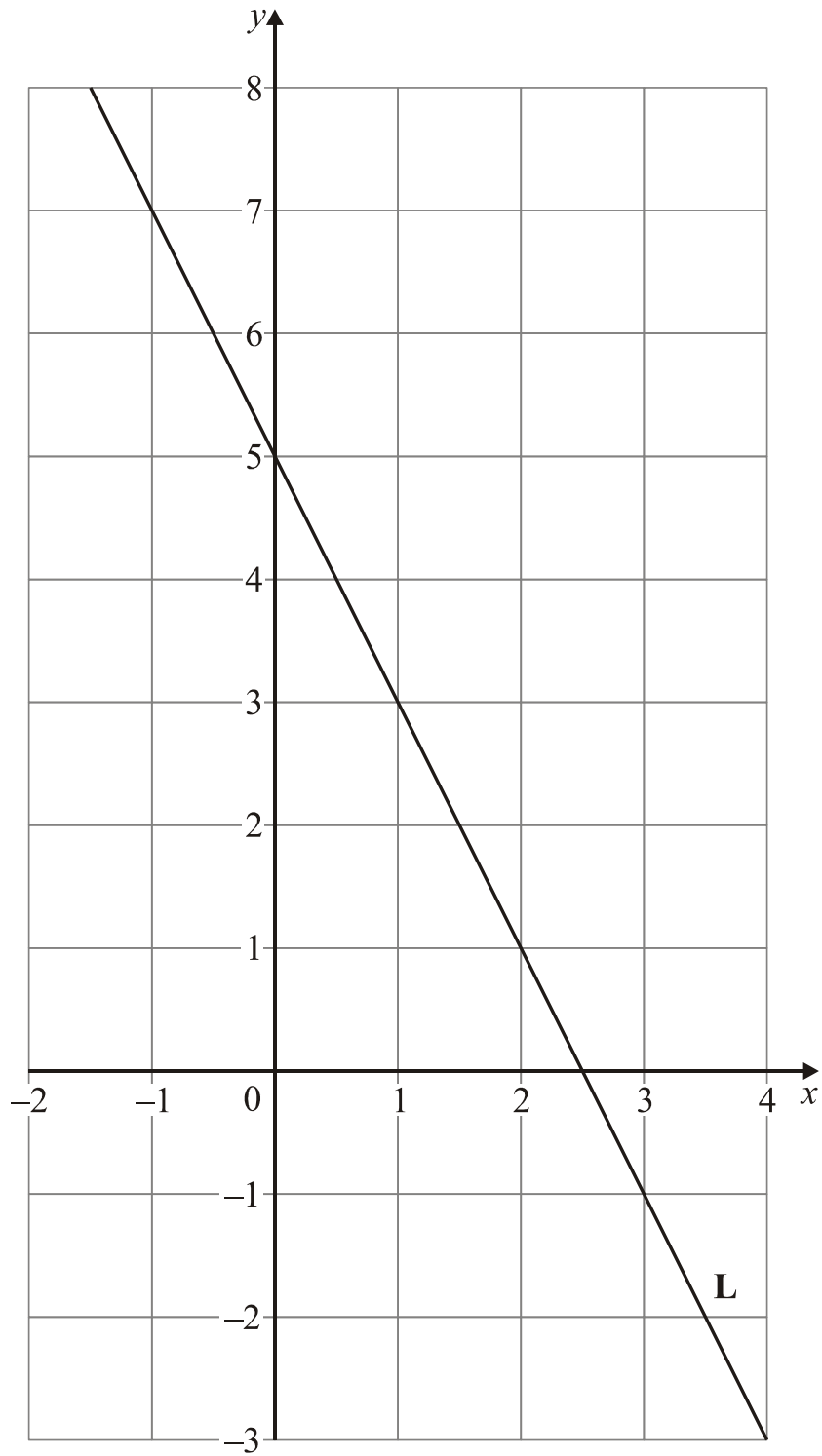
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4. A straight line has equation $y = 3x - 2$

(a) Write down the gradient of the line.

.... (1)

(b) Write down the coordinates of the point where the line crosses the y axis.

.... (1)

5.

Find the equation of line L

.... (3)

6a) A straight line has equation $2y - 10x = 8$
Work out the gradient of this line.

.... (2)

b) Write down the equation of a line parallel to this line.
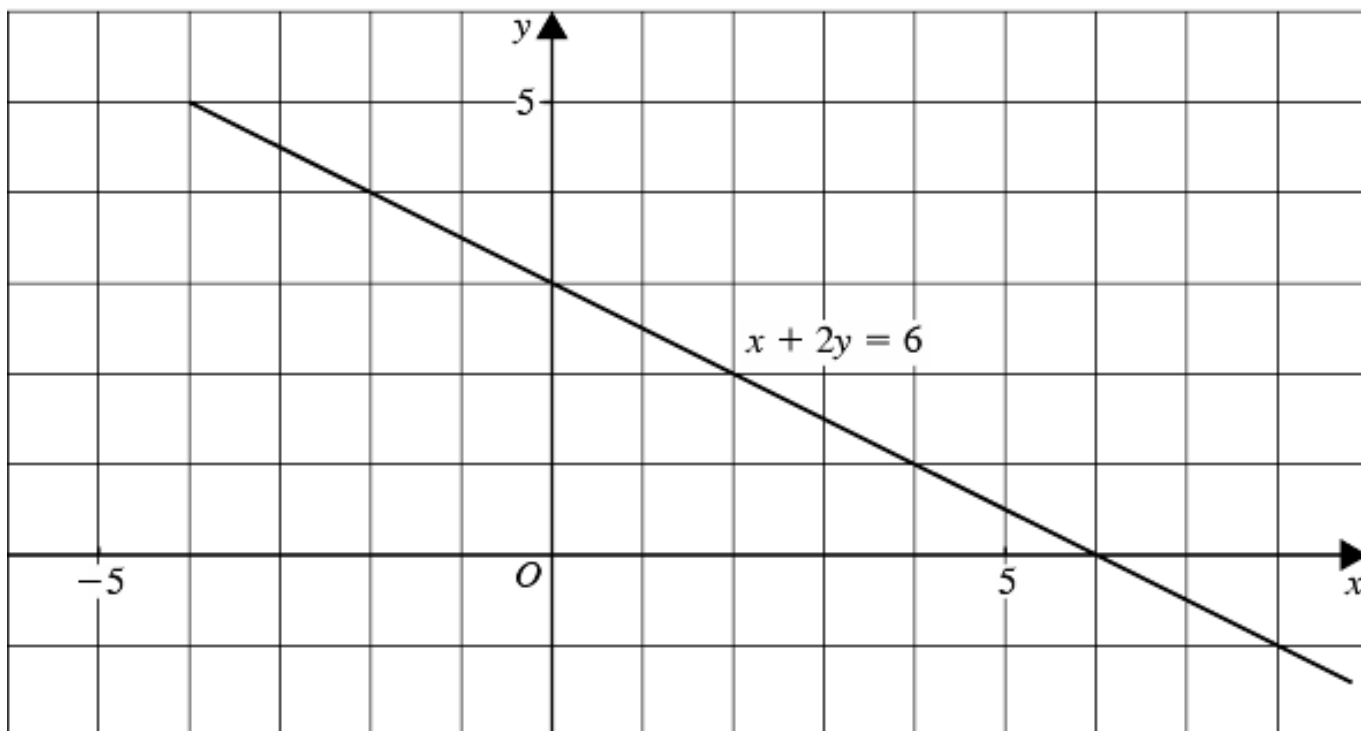
.... (1)

7a) A straight line has equation $4y - 5x = 2$
Work out the gradient of this line.

.... (2)

b) Write down the equation of a line parallel to this line.

.... (1)

8. The line with equation $x + 2y = 6$ has been drawn on the grid.

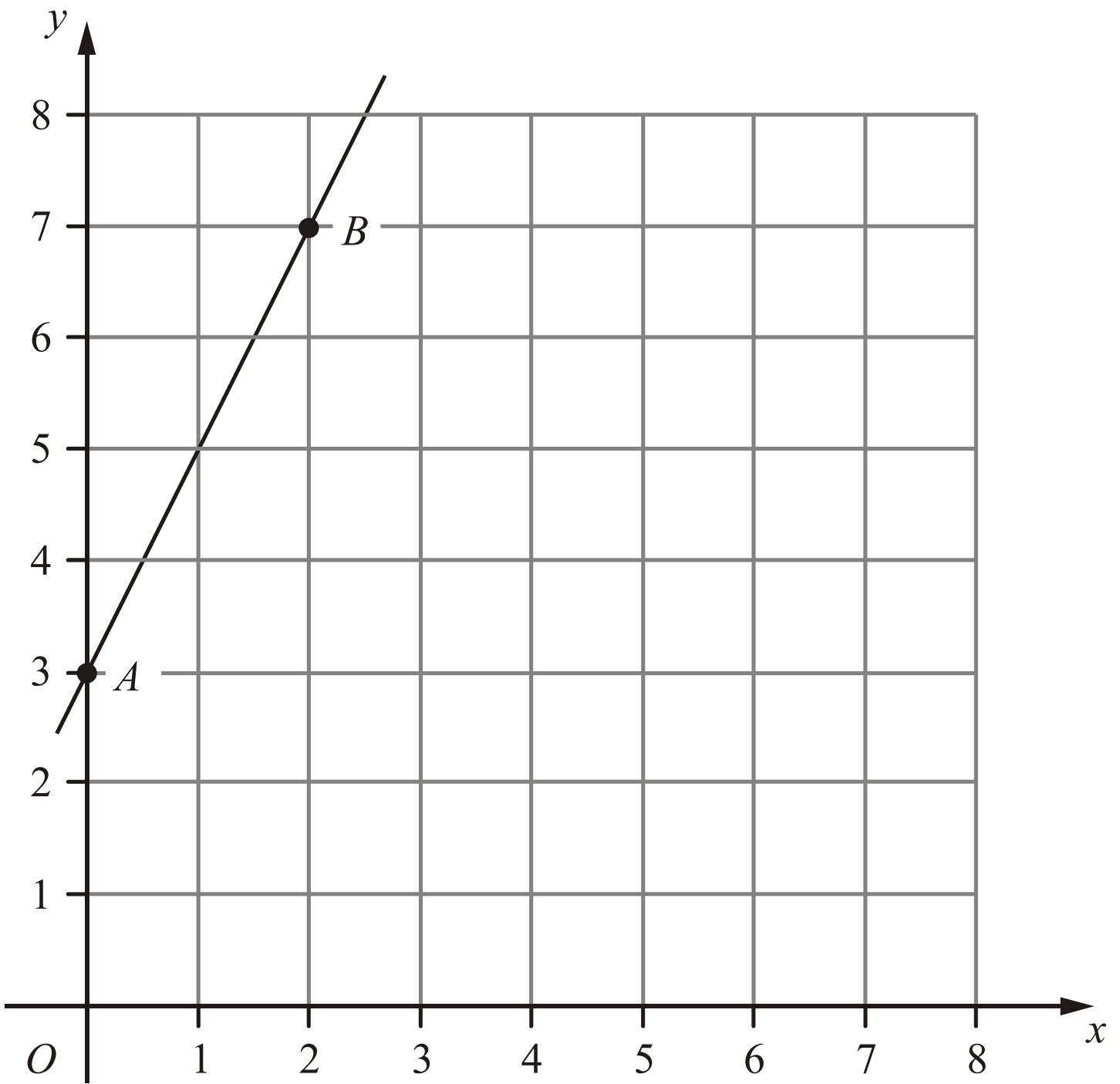(a) Rearrange the equation $x + 2y = 6$ to make y the subject.

.... (2)

(b) Write down the gradient of the line with equation $x + 2y = 6$

.... (2)

(c) Write down the equation of the line which is parallel to the line with equation $x + 2y = 6$ and passes through the point with coordinates (0, 7).

.... (1)
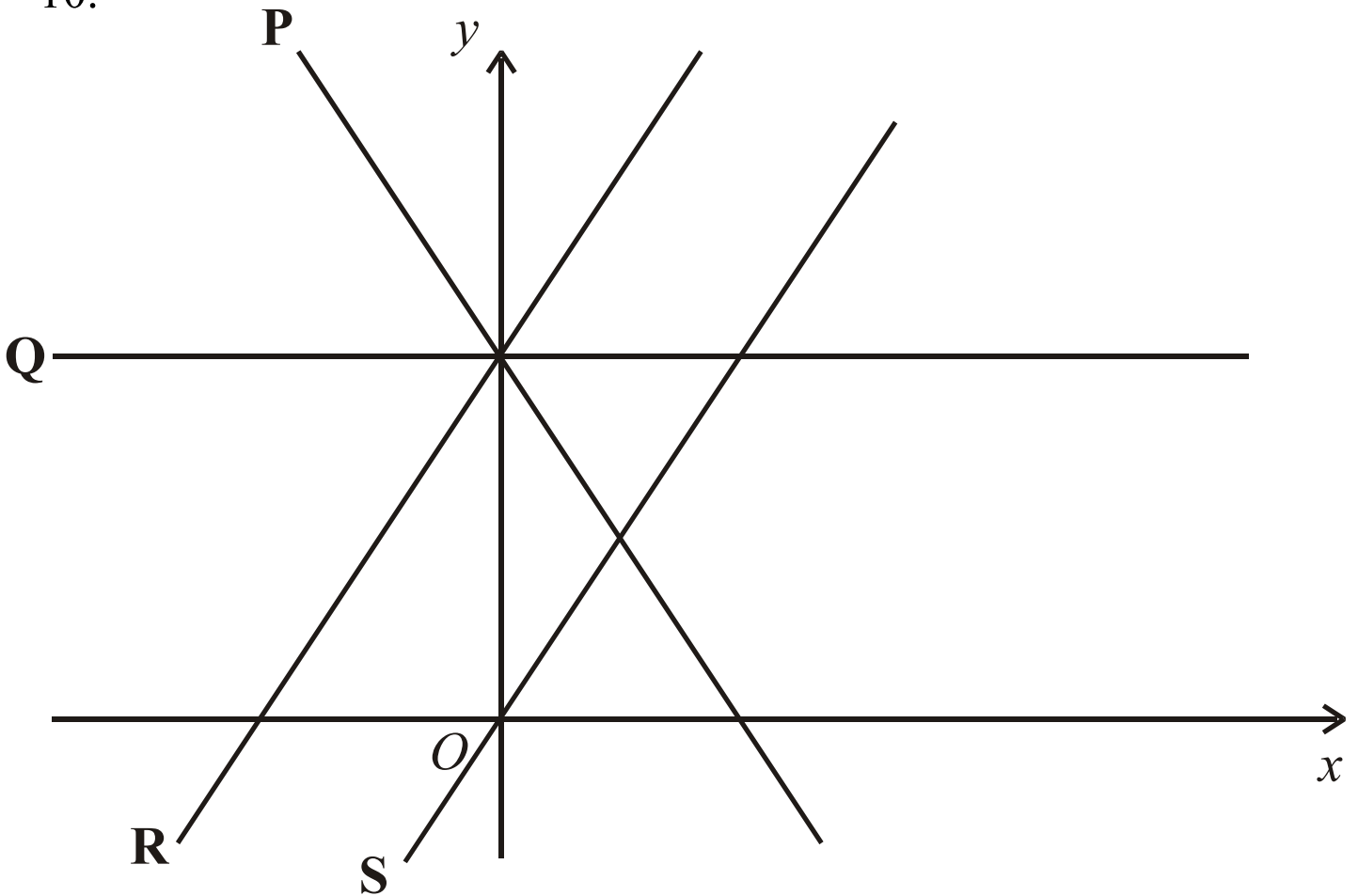
9.

Find the equation of line that passes through A and B

.... (3)

7. The diagram shows 4 straight lines, labelled P, Q, R and S.
The equations of the straight lines are:

$A: y = 2x$
$B: y = 3 - 2x$
$C: y = 2x + 3$
$D: y = 3$

Match each straight line, P, Q, R and S to its equation.
Complete the table.

Equation	A	B	C	D
Straight line	S	P	R	Q

(2)