

Year 9 – Unit 8 Revision Questions

Q1.

Solve the simultaneous equations

$$3x + y = -4$$

$$3x - 4y = 6$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for question = 3 marks)

Q2.

Solve the simultaneous equations

$$2x - y = 13$$

$$x - 2y = 11$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for question = 3 marks)

Q3.

Solve the simultaneous equations

$$5x + 2y = 11$$

$$4x - 3y = 18$$

$$x = \dots\dots\dots$$

$$y = \dots\dots\dots$$

(Total for Question is 4 marks)

Q4.

A cinema sells adult tickets and child tickets.

The total cost of 3 adult tickets and 1 child ticket is £30

The total cost of 1 adult ticket and 3 child tickets is £22

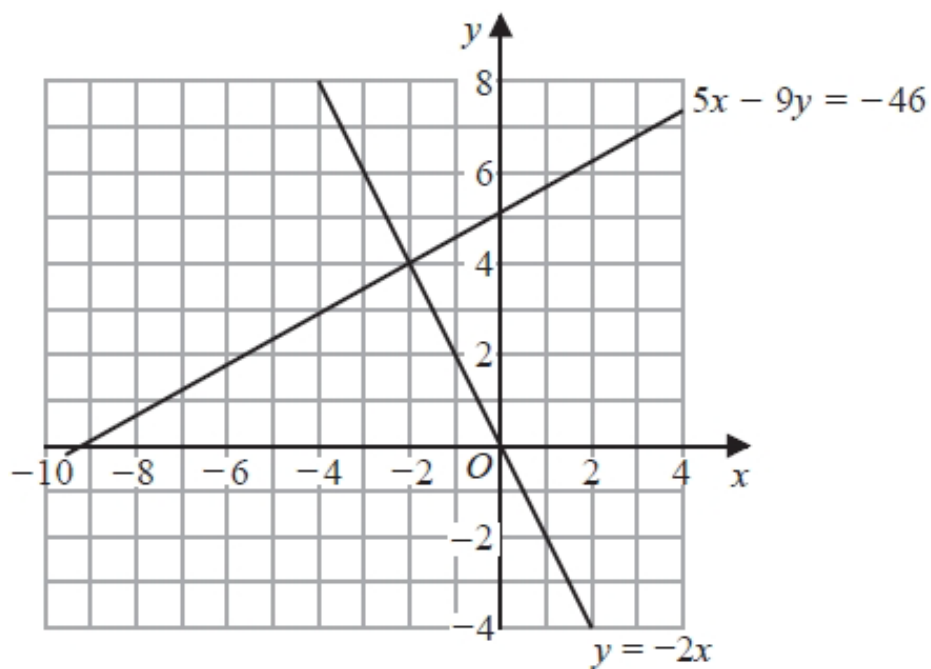
Work out the cost of an adult ticket and the cost of a child ticket.

adult ticket £.....

child ticket £.....

(Total for question = 4 marks)

Q5.



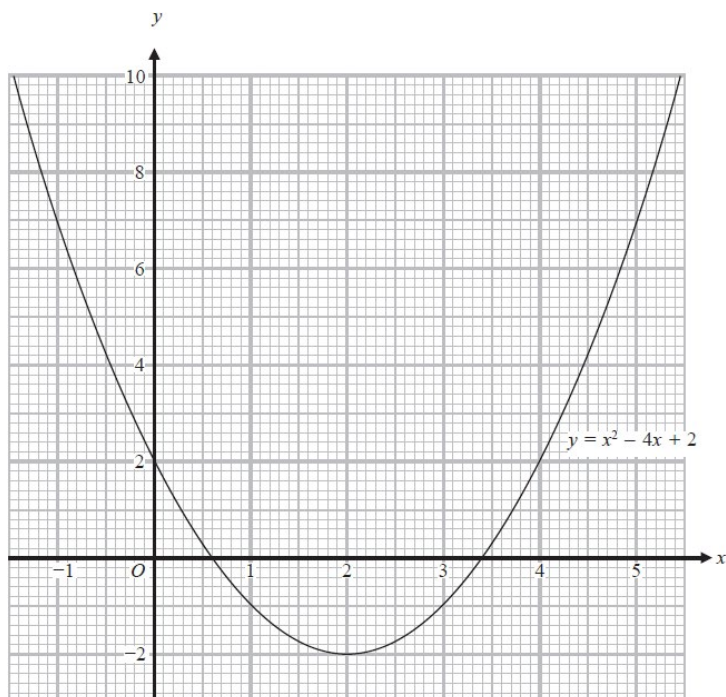
(a) Use these graphs to solve the simultaneous equations

$$\begin{aligned} 5x - 9y &= -46 \\ y &= -2x \end{aligned}$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

(1)

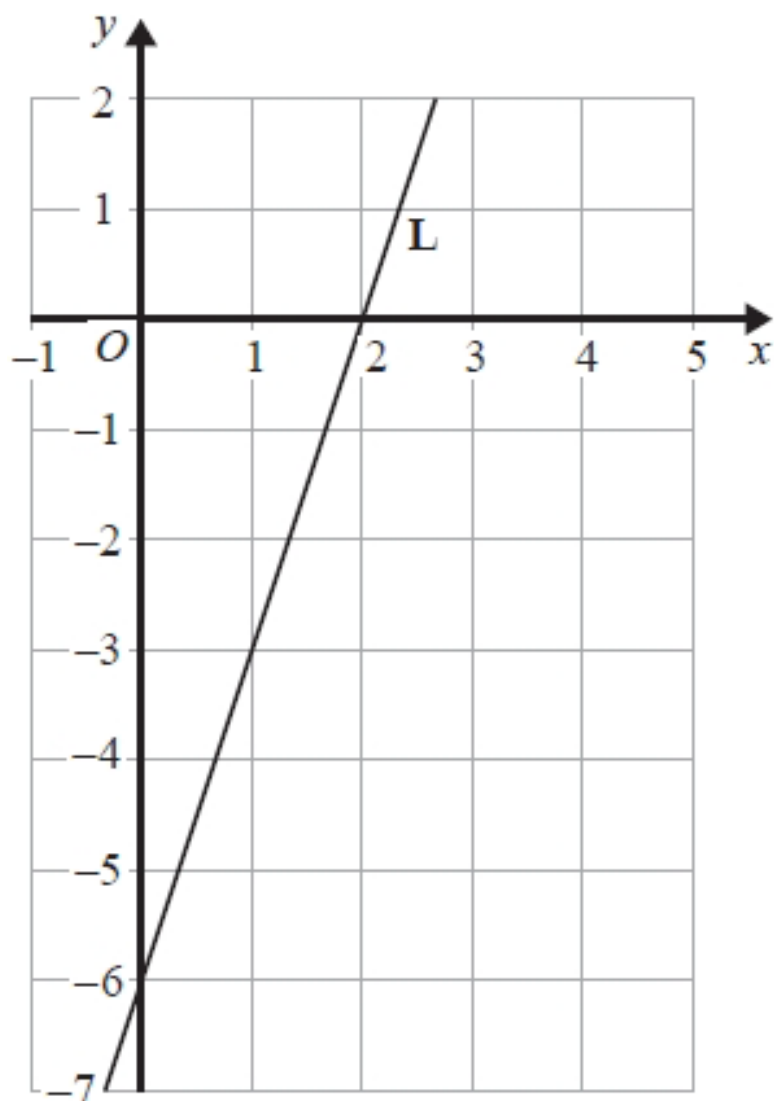


(b) Use this graph to find estimates for the solutions of the quadratic equation $x^2 - 4x + 2 = 0$

(2)

Q6.

The line **L** is shown on the grid.

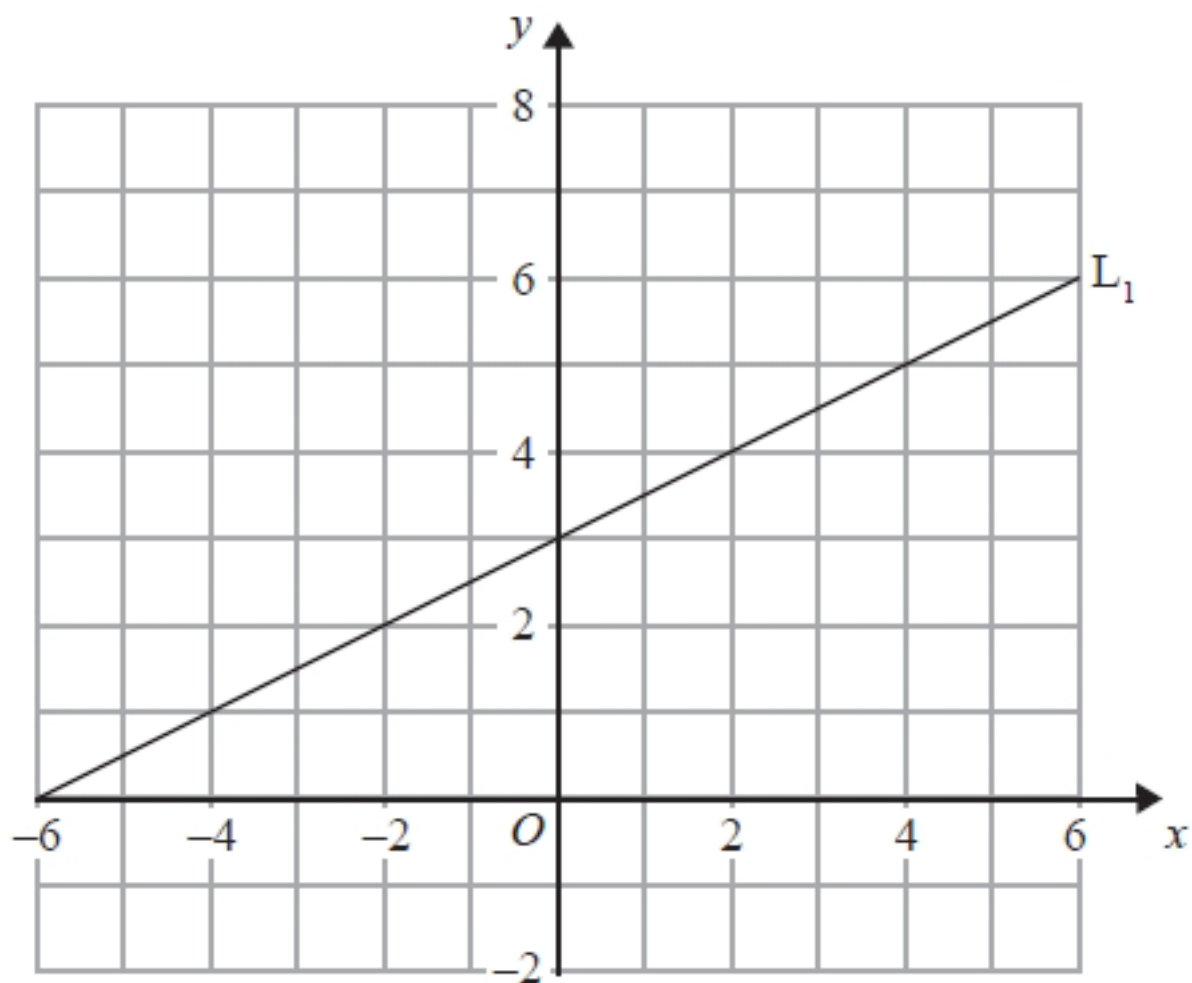


Find an equation for **L**.

.....
(Total for question = 3 marks)

Q7.

The diagram shows a straight line, L_1 , drawn on a grid.



A straight line, L_2 , is parallel to the straight line L_1 and passes through the point $(0, -5)$.

Find an equation of the straight line L_2 .

(Total for Question is 3 marks)

Q8.

The straight line **L** has equation $y = 2x - 5$

Find an equation of the straight line perpendicular to **L** which passes through $(-2, 3)$.

.....

(Total for Question is 3 marks)

Q9.

The straight line **L** has equation $4x + y = 7$

Find an equation of the straight line perpendicular to **L** that passes through $(-8, 3)$.

.....

(Total for question = 4 marks)

Q10.

The straight line **L** has equation $y = 3x - 4$

(a) Write down an equation of the line parallel to **L** which passes through the origin.

.....
(2)

(b) Find an equation of the straight line that passes through (0, 5) and is perpendicular to **L**.

.....
(2)

(Total for Question is 4 marks)

Q11.

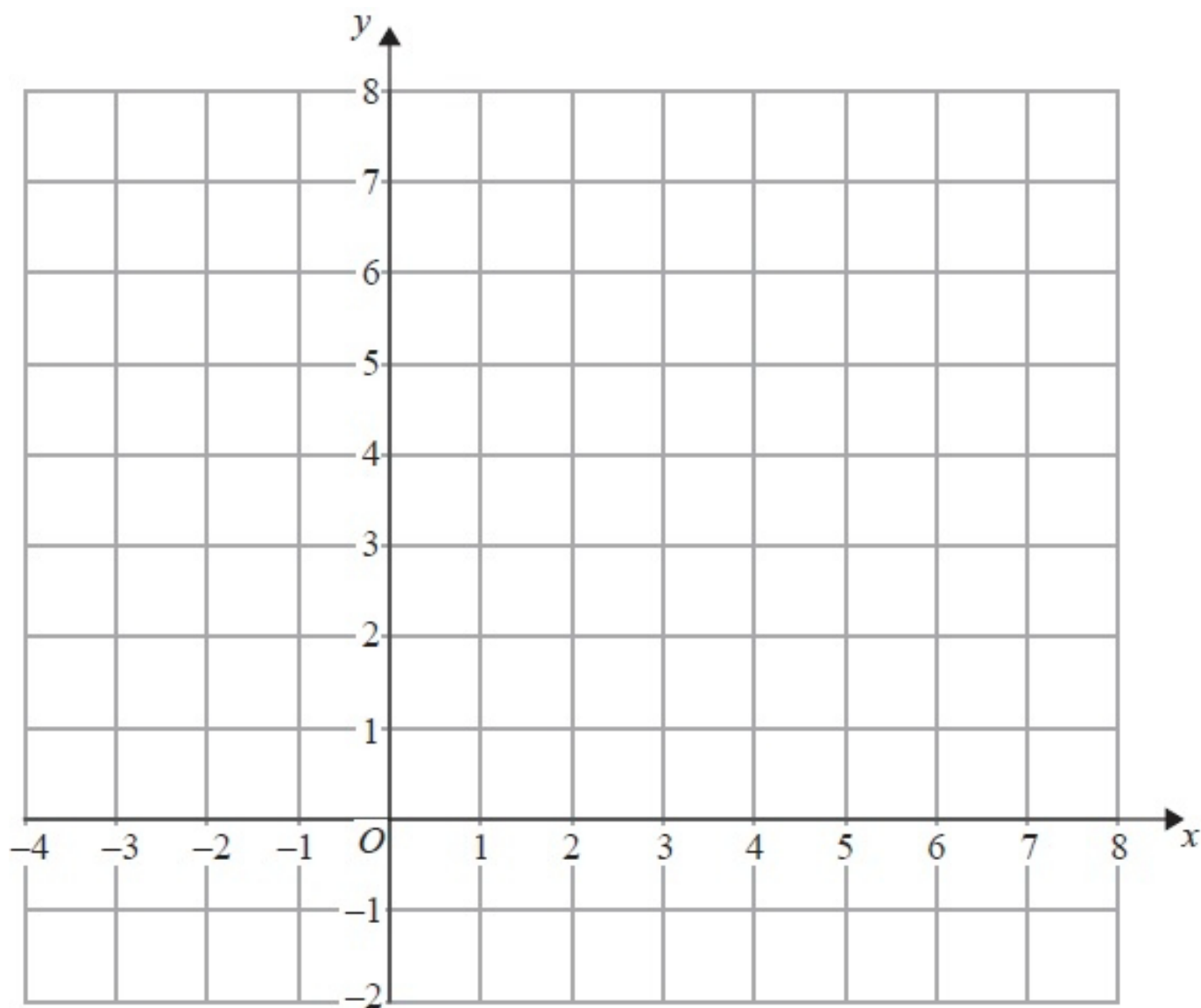
On the grid below, show by shading, the region defined by the inequalities

$$x + y < 6$$

$$x > -1$$

$$y > 2$$

Mark this region with the letter R.



(Total for Question is 4 marks)

Q12.

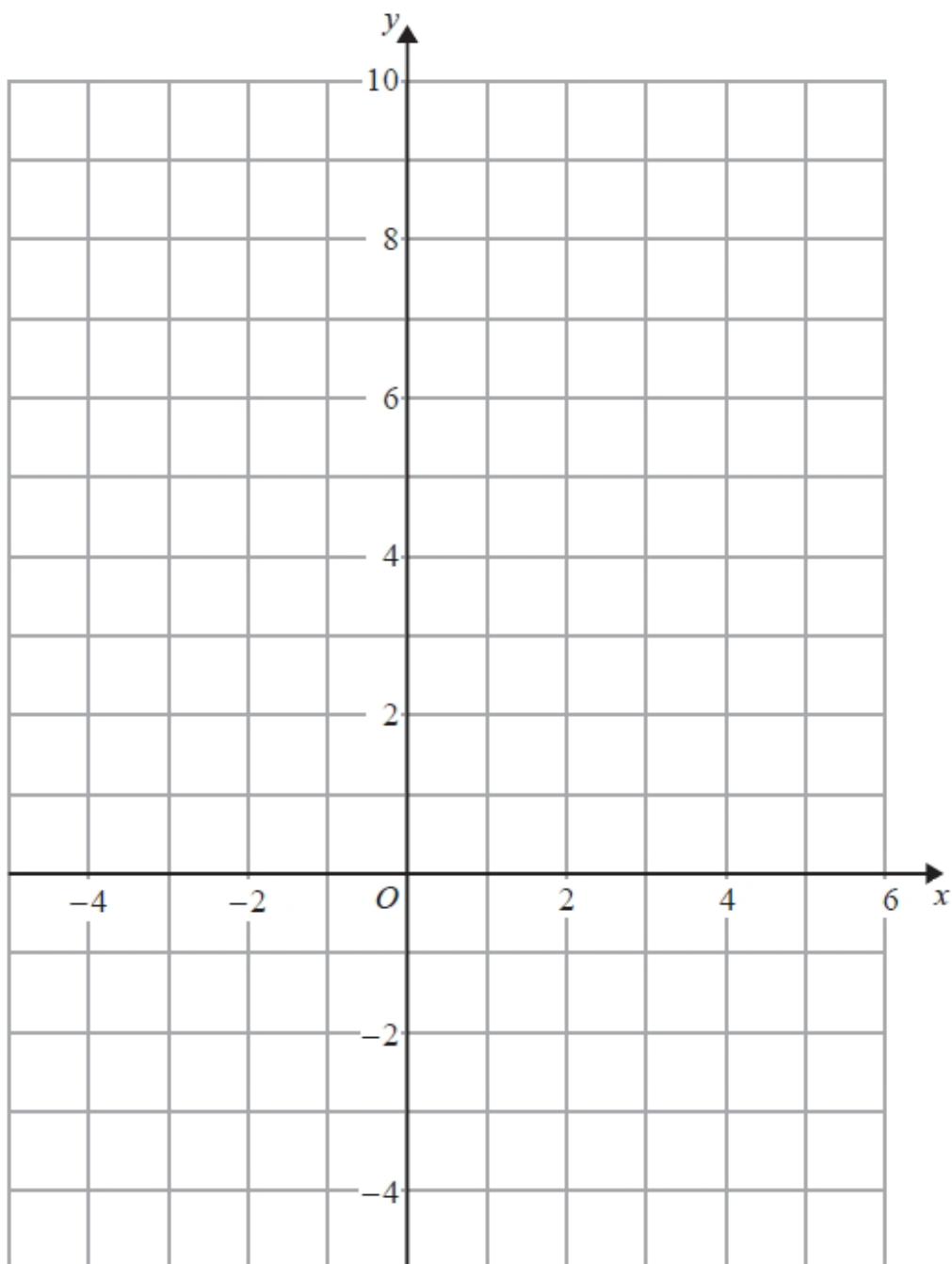
On the grid, shade the region that satisfies all these inequalities.

$$x + y < 4$$

$$y > x - 1$$

$$y < 3x$$

Label the region **R**.



(Total for question is 4 marks)