Autumn 2017 Paper 1 Q11

1 3 teas and 2 coffees have a total cost of £7.80
5 teas and 4 coffees have a total cost of £14.20

Work out the cost of one tea and the cost of one coffee.

tea £.....

coffee £.....

(Total for Question 1 is 4 marks)

Summer 2017 Paper 1 Q20

2 Solve algebraically the simultaneous equations

$$x^2 + y^2 = 25$$
$$y - 3x = 13$$

.....

(Total for Question 2 is 5 marks)

Summer 2017 Paper 3 Q2

3 Solve the simultaneous equations

$$3x + y = -4$$
$$3x - 4y = 6$$

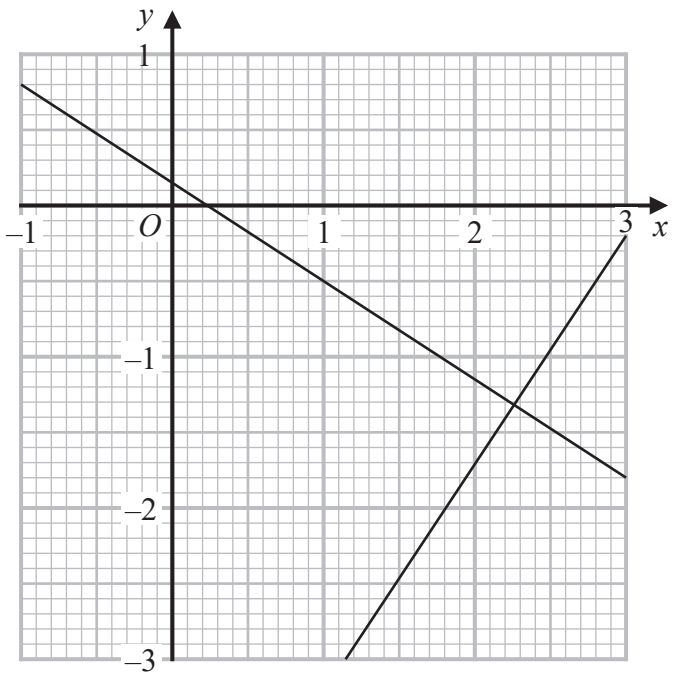
$x =$ .....

$y =$ .....

(Total for Question 3 is 3 marks)

Summer 2019 Paper 1 Q10

4 The graphs with equations $3y + 2x = \frac{1}{2}$ and $2y - 3x = -\frac{113}{12}$ have been drawn on the grid below.



Using the graphs, find estimates of the solutions of the simultaneous equations

$$3y + 2x = \frac{1}{2}$$

$$2y - 3x = -\frac{113}{12}$$

$x =$ .....

$y =$ .....

(Total for Question 4 is 2 marks)

Summer 2019 Paper 3 Q20

5 Solve algebraically the simultaneous equations

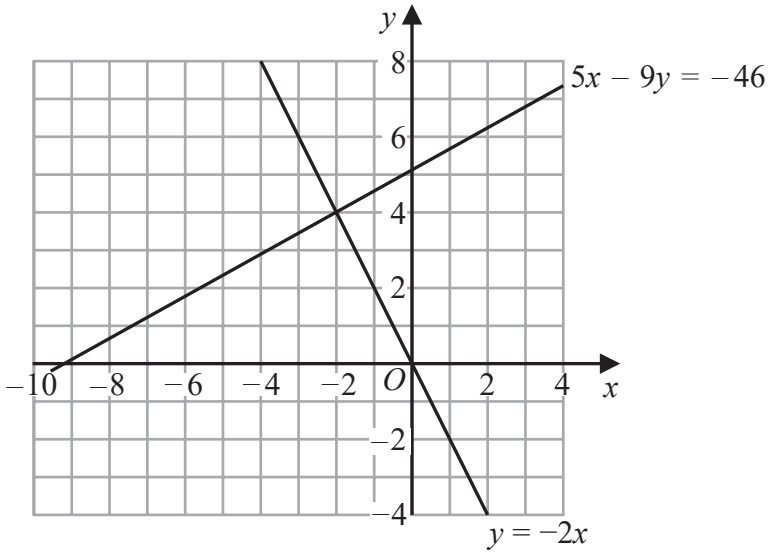
$$x^2 - 4y^2 = 9$$
$$3x + 4y = 7$$

.....

(Total for Question 5 is 5 marks)

Summer 2020 Paper 3 Q6

6



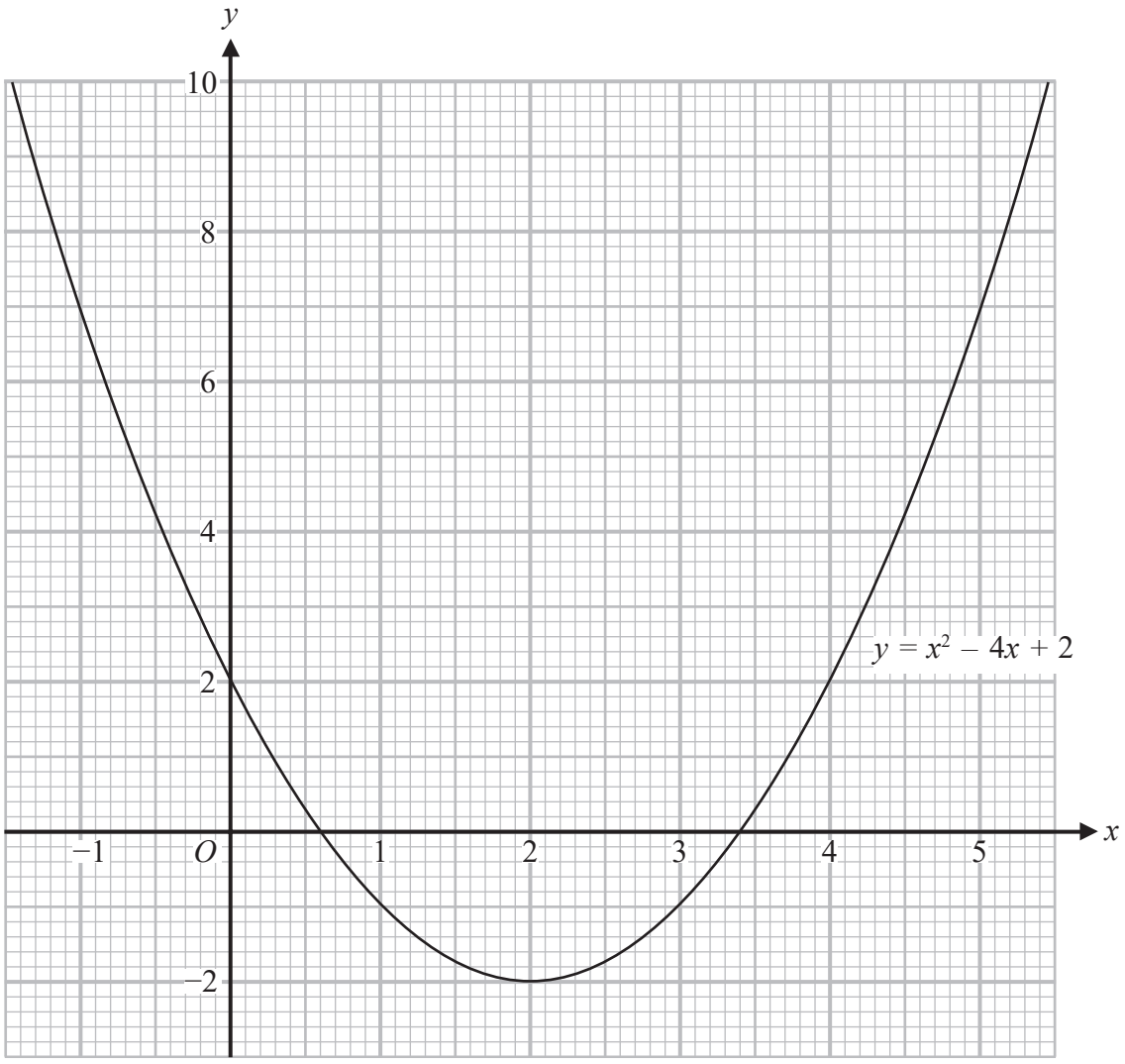
(a) Use these graphs to solve the simultaneous equations

$$5x - 9y = -46$$
$$y = -2x$$

$x =$ .....

$y =$ .....

(1)



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

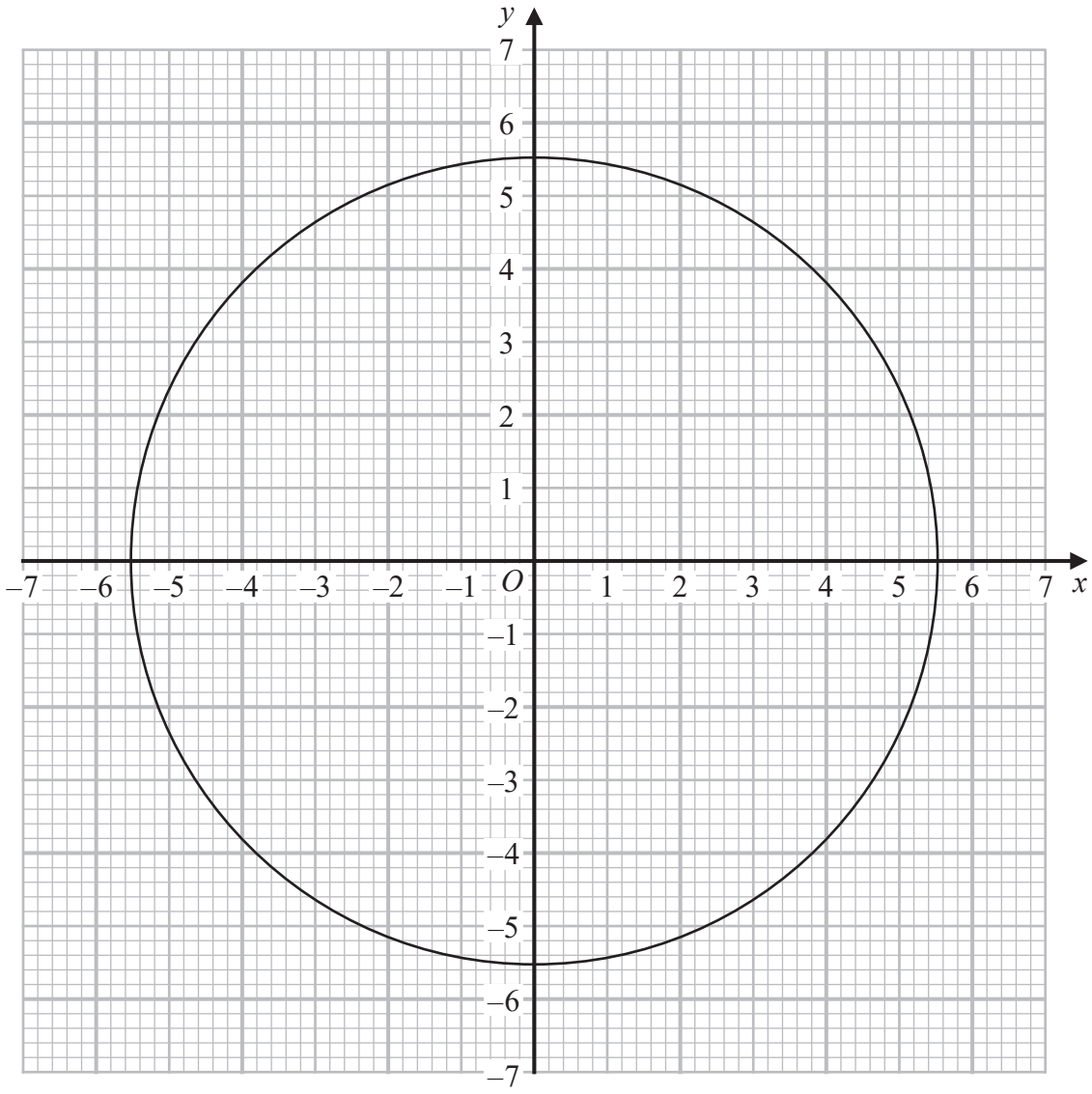
.....

(2)

(Total for Question 6 is 3 marks)

Summer 2021 Paper 1 Q20

7 The diagram shows the graph of $x^2 + y^2 = 30.25$



Use the graph to find estimates for the solutions of the simultaneous equations

$$x^2 + y^2 = 30.25$$
$$y - 2x = 1$$

.....

(Total for Question 7 is 3 marks)

Summer 2021 Paper 3 Q16

8 The curve **C** has equation $y = x^2 + 3x - 3$

The line **L** has equation $y - 5x + 4 = 0$

Show, algebraically, that **C** and **L** have exactly one point in common.

(Total for Question 8 is 4 marks)

Autumn 2018 Paper 1 Q6

9 Solve the simultaneous equations

$$5x + y = 21$$
$$x - 3y = 9$$

$x =$ .....

$y =$ .....

(Total for Question 9 is 3 marks)

Autumn 2018 Paper 3 Q19

10 Solve algebraically the simultaneous equations

$$2x^2 - y^2 = 17$$
$$x + 2y = 1$$

(Total for Question 10 is 5 marks)

Autumn 2022 Paper 1 Q12

11 Solve the simultaneous equations

$$5x + 2y = 11$$
$$4x + 3y = 6$$

$x =$ .....

$y =$ .....

(Total for Question 11 is 4 marks)

Summer 2022 Paper 3 Q22

12 **L** is the straight line with equation $y = 2x - 5$

C is a graph with equation $y^2 = 6x^2 - 25x - 8$

Using algebra, find the coordinates of the points of intersection of **L** and **C**.
You must show all your working.

(..... , ...)

(..... , ...)

(Total for Question 12 is 5 marks)