Name: _____

GCSE (1 - 9) Linear Equations	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Qu	Paper where the question appeared	Qu	Paper where the question appeared
1	Edexcel, GCSE, Summer 2017, Paper 1F, Q3	15	Edexcel, GCSE, Autumn 2020, Paper 3F, Q14
2	Edexcel, GCSE, Summer 2017, Paper 1F, Q19	16	Edexcel, GCSE, Autumn 2021, Paper 3F, Q25
3	Edexcel, GCSE, Autumn 2017, Paper 1F, Q3	17	Edexcel, GCSE, Autumn 2021, Paper 3F, Q17
4	Edexcel, GCSE, Autumn 2017, Paper 2F, Q16	18	Edexcel, GCSE, Autumn 2021, Paper 1F, Q16
5	Edexcel, GCSE, Summer 2018, Paper 1F, Q16	19	Edexcel, GCSE, Autumn 2021, Paper 1F, Q15
6	Edexcel, GCSE, Summer 2018, Paper 2F, Q11	20	Edexcel, GCSE, Summer 2022, Paper 2F, Q17
7	Edexcel, GCSE, Summer 2018, Paper 3F, Q25	21	Edexcel, GCSE, Summer 2023, Paper 1F, Q5
8	Edexcel, GCSE, Autumn 2018, Paper 2F, Q19	22	Edexcel, GCSE, Summer 2023, Paper 3F, Q18
9	Edexcel, GCSE, Autumn 2018, Paper 3F, Q17	23	Edexcel, GCSE, November 2022, Paper 1F, Q8
10	Edexcel, GCSE, Summer 2019, Paper 1F, Q10	24	Edexcel, GCSE, November 2022, Paper 2F, Q14
11	Edexcel, GCSE, Autumn 2019, Paper 1F, Q17		
12	Edexcel, GCSE, Autumn 2019, Paper 3F, Q19		
13	Edexcel, GCSE, Autumn 2020, Paper 1F, Q19		
14	Edexcel, GCSE, Autumn 2020, Paper 2F, Q10		

Linear Equations (Questions from Edexcel GCSE Past Papers)

1

(a) Simplify $7 \times e \times f \times 8$

.....

(1)

(b) Solve $\frac{x}{5} = 2\frac{1}{2}$

$x =$ .....

(1)

(Total for Question 3 is 2 marks)

[Edexcel, GCSE, Summer 2017, Paper 1F, Q3]

2

(a) Solve $4(x - 5) = 18$

$x =$ .....

(2)

$-3 < t \leqslant 2$

t is an integer.

(b) Write down all the possible values of t.

.....

(2)

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Summer 2017, Paper 1F, Q19]

3

Solve $\frac{y}{4} = 10.5$

$y =$ .....

(Total for Question 3 is 1 mark)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q3]

4

Solve $5x - 6 = 3(x - 1)$

$x =$ .....

(Total for Question 16 is 3 marks)

[Edexcel, GCSE, Autumn 2017, Paper 2F, Q16]

5

$P = 4x + 3y$

$x = 5$
$y = -2$

(a) Work out the value of P.

.....

(2)

(b) Expand $4e(e + 2)$

.....

(2)

(c) Solve $3(m - 4) = 21$

$m =$ .....

(2)

(Total for Question 16 is 6 marks)

[Edexcel, GCSE, Summer 2018, Paper 1F, Q16]

6

(a) Solve $x + x + x = 51$

$x =$ .....

(1)

(b) Solve $\frac{y}{4} = 3$

$y =$ .....

(1)

(c) Solve $2f + 7 = 18$

$f =$ .....

(1)

(Total for Question 11 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q11]

7

Solve $\frac{5-x}{2} = 2x - 7$

$x =$ .....

(Total for Question 25 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 3F, Q25]

8

(a) Solve $3(x - 4) = 12$

$x =$ .....

(2)

(b) Factorise fully $9b - 3b^2$

.....

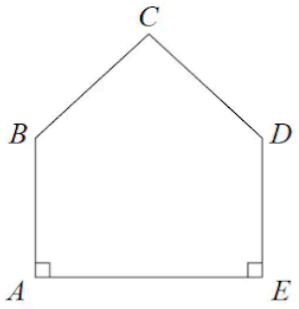
(2)

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Autumn 2018, Paper 2F, Q19]

9

The diagram shows a pentagon.
The pentagon has one line of symmetry.



$AE = 4x$
$AB = 2x + 1$
$BC = x + 2$

All these measurements are given in centimetres.

The perimeter of the pentagon is 18 cm.

(a) Show that $10x + 6 = 18$

(3)

(b) Find the value of x.

$x =$ .....

(2)

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q17]

10

(a) Solve $t + t + t = 12$

$t =$ .....

(1)

(b) Solve $x - 2 = 6$

$x =$ .....

(1)

(c) Solve $6w + 2 = 20$

$w =$ .....

(2)

(Total for Question 10 is 4 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q10]

11

$x - 1 = 2$

Work out the value of $2x^2$

.....

(Total for Question 17 is 3 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q17]

12

Solve $4(x - 6) = 44$

$x =$ .....

(Total for Question 19 is 2 marks)

[Edexcel, GCSE, Autumn 2019, Paper 3F, Q19]

13

(a) Expand $x(x - 4)$

.....

(1)

(b) Factorise $15y - 10$

.....

(1)

(c) Solve $7(f - 5) = 28$

$f =$ .....

(2)

(Total for Question 19 is 4 marks)

[Edexcel, GCSE, Autumn 2020, Paper 1F, Q19]

14

(a) Solve $3m = 36$

$m =$ .....

(1)

(b) Solve $7 - x = 3$

$x =$ .....

(1)

(Total for Question 10 is 2 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q10]

15

(a) Simplify $3x + 5y + 2x - 4y$

.....

(2)

(b) Solve $5p + 7 = 22$

$p =$ .....

(2)

(Total for Question 14 is 4 marks)

[Edexcel, GCSE, Autumn 2020, Paper 3F, Q14]

16

The first four terms of a Fibonacci sequence are

a $2a$ $3a$ $5a$

The sum of the first five terms of this sequence is 228

Work out the value of a.

.....

(Total for Question 25 is 3 marks)

[Edexcel, GCSE, Autumn 2021, Paper 3F, Q25]

17

(a) Expand $y(y + 5)$

.....

(1)

(b) Factorise $4a - 6$

.....

(1)

(c) Solve $2(5x - 4) = 21$

$x =$ .....

(3)

(d) Simplify $4e^2f \times 5ef^3$

.....

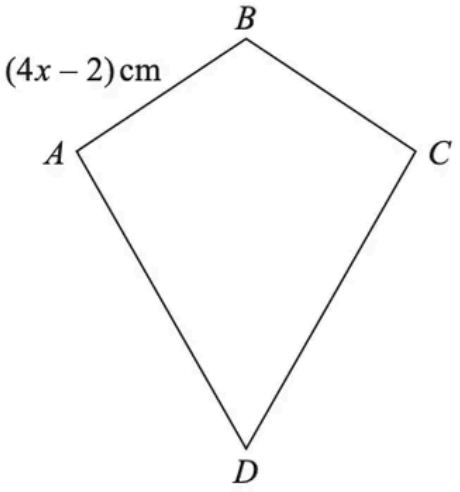
(2)

(Total for Question 17 is 7 marks)

[Edexcel, GCSE, Autumn 2021, Paper 3F, Q17]

18

$ABCD$ is a kite.



$AB = (4x - 2)\,\text{cm}$

Jasper says that x could be 0.5

(a) Explain why Jasper cannot be correct.

.....

.....

.....

(1)

$AD = 3AB$

The kite has a perimeter of 64 cm.

(b) Find the value of x.

$x =$ .....

(3)

(Total for Question 16 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q16]

19

(a) Expand $2(a + d)$

.....

(1)

(b) Factorise $6y^2 - 5y$

.....

(1)

(c) Solve $4x - 7 = 37$

$x =$.....

(2)

(Total for Question 15 is 4 marks)

[Edexcel, GCSE, Autumn 2021, Paper 1F, Q15]

20

(a) Expand $3(4 - 2x)$

.....

(1)

(b) Solve $\frac{3y}{4} = 12$

$y =$ .....

(2)

(c) Factorise $4p + 6$

.....

(1)

(Total for Question 17 is 4 marks)

[Edexcel, GCSE, Summer 2022, Paper 2F, Q17]

21

Solve $p - 2 = 3$

$p =$ .....

(Total for Question 5 is 1 mark)

[Edexcel, GCSE, Summer 2023, Paper 1F, Q5]

22

Solve $4(2x - 3) = 20$

$x =$ .....

(Total for Question 18 is 3 marks)

[Edexcel, GCSE, Summer 2023, Paper 3F, Q18]

23

(a) Solve $m - 3 = 4$

$m =$ .....

(1)

(b) Solve $3n + n = 24$

$n =$ .....

(2)

(Total for Question 8 is 3 marks)

[Edexcel, GCSE, November 2022, Paper 1F, Q8]

24

(a) Simplify $4c + 7d + 3c - d$

.....

(2)

(b) Solve $5(2m - 6) = 40$

$m =$ .....

(3)

There are x sweets in a box.

There are y sweets in a packet.

(c) Write an expression, in terms of x and y, for the total number of sweets in 3 boxes and 2 packets.

.....

(2)

(Total for Question 14 is 7 marks)

[Edexcel, GCSE, November 2022, Paper 2F, Q14]