Name: SOLUTIONS

GCSE (1 - 9)

Linear Inequalities on a Number Line

Buy me a coffee

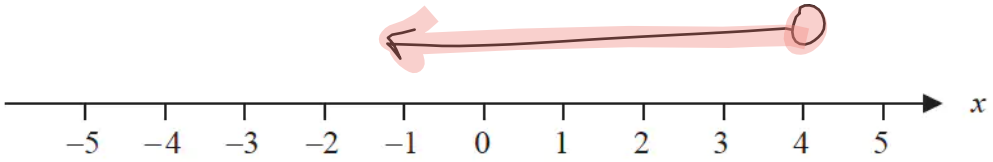
Solutions by
Kenneth Stafford
MATHS TUTOR
ken@kennethstafford.co.uk

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

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2018, Paper 3F, Q19
2	Edexcel, GCSE, Summer 2019, Paper 2F, Q20
3	Edexcel, GCSE, Autumn 2019, Paper 1F, Q19
4	Edexcel, GCSE, Autumn 2021, Paper 2F, Q21
5	Edexcel, GCSE, Summer 2023, Paper 2F, Q23

1

(a) On the number line, show the inequality $x < 4$



(2)

$3 < y \leqslant 7$ where y is an integer.

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

3 4 5 6 7

4, 5, 6, 7

(2)

(c) Solve $3x + 5 \geqslant x + 17$

$3x + 5 \geq x + 17$

$2x + 5 \geq 17$

$2x \geq 12$

$x \geq 6$

$x \geq 6$

(3)

(Total for Question 19 is 7 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q19]

2

(a) Solve $14n > 11n + 6$

$14n > 11n + 6$

$3n > 6$

$n > 2$

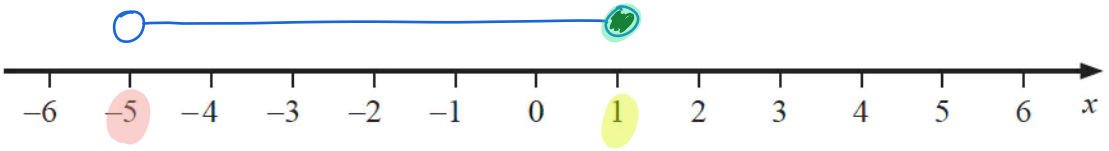
$n > 2$

(2)

(b) On the number line below, show the set of values of x for which $-2 < x + 3 \leqslant 4$

$-2 < x + 3 \leq 4$

$-5 < x \leq 1$



(3)

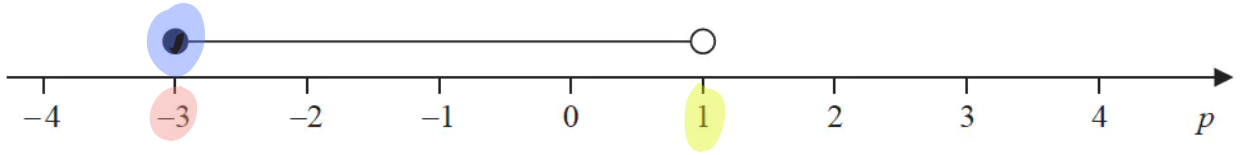
(Total for Question 20 is 5 marks)

[Edexcel, GCSE, Summer 2019, Paper 2F, Q20]

Linear Inequalities on a Number Line (Past Paper Questions)

3

Here is a number line.



Write down the inequality shown on the number line.

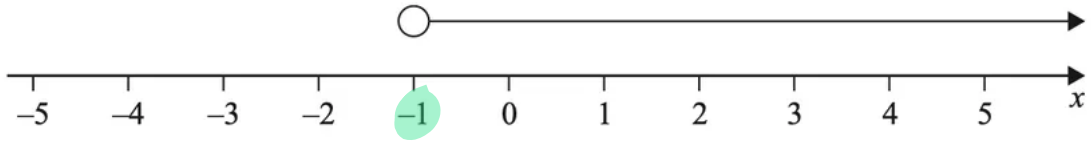
$-3 \leq p < 1$

(Total for Question 19 is 2 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q19]

4

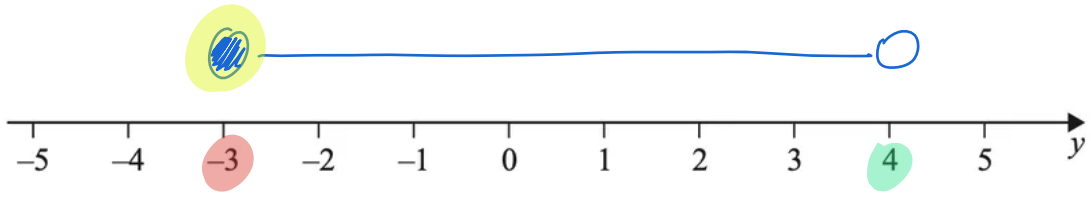
(a) Write down the inequality shown on this number line.



$x > -1$

(1)

(b) On the number line below, show the inequality $-3 \leqslant y < 4$



(2)

(Total for Question 21 is 3 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2F, Q21]

5

$-2 \leqslant n < 5$

n is an integer.

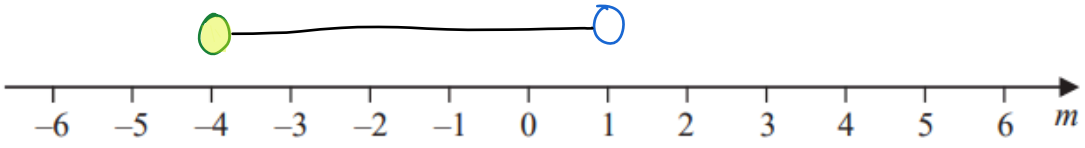
$-2, -1, 0, 1, 2, 3, 4, \cancel{5}$

(a) Write down the greatest possible value of n.

4

(1)

(b) On the number line below, show the inequality $-4 \leqslant m < 1$



(2)

(c) Solve $\frac{2}{5}g - 4 < 6$

$\frac{2}{5}g - 4 < 6$ (+4)

$\frac{2}{5}g < 10$ (×5)

$2g < 50$ (÷2)

$g < 25$

$g < 25$

(3)

(Total for Question 23 is 6 marks)

[Edexcel, GCSE, Summer 2023, Paper 2F, Q23]