Name:_____

GCSE (1 - 9) Quadratic Inequalities	Solutions:

These questions are compiled from released Pearson Edexcel GCSE maths exam papers

They contain exam questions from up until the ***November 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

Past Papers:	**Similar Worksheets:**
Solutions:	**This worksheet:**

1

Solve $2x^2 + 3x - 2 > 0$

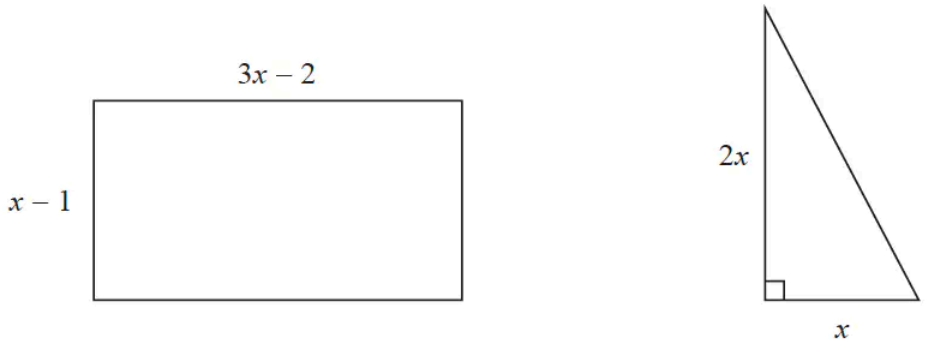
.....

(Total for Question 19 is 3 marks)

[Edexcel, GCSE, Summer 2017, Paper 3H, Q19]

2

Here is a rectangle and a right-angled triangle.



All measurements are in centimetres.
The area of the rectangle is greater than the area of the triangle.

Find the set of possible values of x.

(Total for Question 23 is 5 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1H, Q23]

3

n is an integer such that $3n + 2 \leqslant 14$ and $\dfrac{6n}{n^2 + 5} > 1$

Find all the possible values of n.

.....

(Total for Question 20 is 5 marks)

[Edexcel, GCSE, Summer 2018, Paper 1H, Q20]

4

Solve $22 < \frac{m^2 + 7}{4} < 32$

Show all your working.

(Total for Question 19 is 5 marks)

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

5

(a) Show that $(2x + 1)(x + 3)(3x + 7)$ can be written in the form $ax^3 + bx^2 + cx + d$ where a, b, c and d are integers.

(3)

(b) Solve $(1 - x)^2 < \frac{9}{25}$

.....

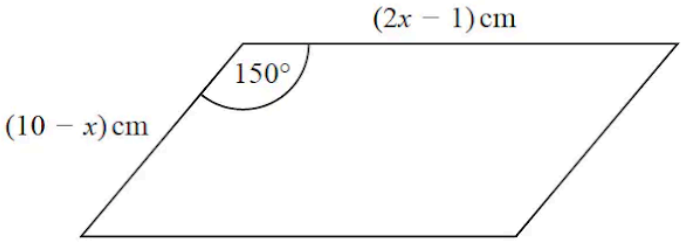
(3)

(Total for Question 18 is 6 marks)

[Edexcel, GCSE, Summer 2019, Paper 3H, Q18]

6

The diagram shows a parallelogram.



The area of the parallelogram is greater than 15 cm^2

(a) Show that $2x^2 - 21x + 40 < 0$

(3)

(b) Find the range of possible values of x.

.....

(3)

(Total for Question 23 is 6 marks)

[Edexcel, GCSE, Autumn 2019, Paper 2H, Q23]

7

Find algebraically the set of values of x for which

$$x^2 - 49 > 0 \quad \textbf{and} \quad 5x^2 - 31x - 72 > 0$$

.....

(Total for Question 22 is 5 marks)

[Edexcel, GCSE, Summer 2022, Paper 2H, Q22]

8

Find the set of possible values of x for which

$$4x^2 - 25 < 0 \quad \textbf{and} \quad 12 - 5x - 3x^2 > 0$$

You must show all your working.

.....

(Total for Question 24 is 5 marks)

[Edexcel, GCSE, Summer 2023, Paper 1H, Q24]

9

(a) Factorise $6x^2 - 5x - 4$

.....

(2)

(b) Hence, or otherwise, solve $6x^2 - 5x - 4 < 0$

.....

(2)

(Total for Question 17 is 4 marks)

[Edexcel, GCSE, November 2023, Paper 1H, Q17]

10

Given that $\frac{2x^2 + y^2}{4x^2 - y^2} = \frac{43}{11}$ where $x > 0$ and $y > 0$

find, in its simplest form, the ratio $x : y$

.....

(Total for Question 23 is 4 marks)

[Edexcel, GCSE, November 2023, Paper 3H, Q23]