

Name

Class



www.MathsTeacherHub.com

Inequalities

(9 – 1) Topic booklet

HIGHER

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

Information

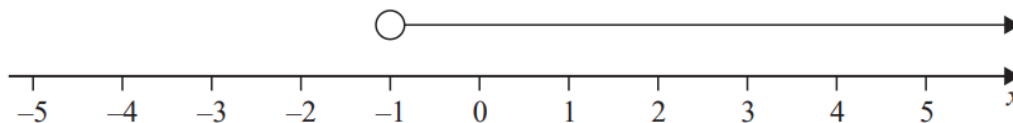
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

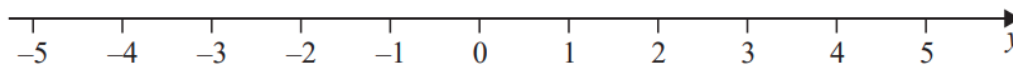
Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

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



.....
(1)

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



(2)

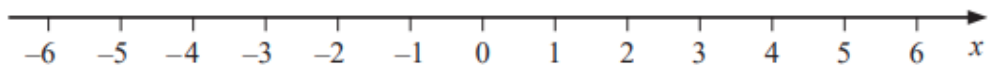
November 2021 – Paper 2H

(Total for Question 1 is 3 marks)

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

.....
(2)

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



(3)

June 2019 – Paper 2H

(Total for Question 1 is 5 marks)

1 Solve $\frac{5x}{2} > 7$

.....
(2)

November 2020 – Paper 3H

(Total for Question 1 is 2 marks)

1 Solve $7x - 27 < 8$

.....
June 2022 – Paper 1H

(Total for Question 1 is 2 marks)

9 (a) Solve $6x + 4 > x + 17$

.....
(2)

(b) n is an integer with $-5 < 2n \leq 6$

Write down all the values of n

.....
(2)

Sample 1 – Paper 3H

(Total for Question 9 is 4 marks)

11 x and y are integers such that

$$3 < x < 8$$

$$4 < y < 10$$

$$\text{and } x + y = 14$$

Find all the possible values of x .

November 2022 – Paper 3H

.....
(Total for Question 11 is 2 marks)

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

.....
(3)

June 2019 – Paper 3H

(Total for Question 18 is 3 marks)

19 Solve $x^2 > 3x + 4$

.....
Sample 1 – Paper 1H

(Total for Question 19 is 3 marks)

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

Show all your working.

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

Find all the possible values of n .

21 Solve the inequality $x^2 > 3(x + 6)$

Specimen 2 – Paper 1H

(Total for Question 21 is 4 marks)