Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Inequalities

Calculator Not Allowed

INSTRUCTIONS TO CANDIDATES

Write your name in the space provided.

Write your answers in the spaces provided in this question paper.

Answer ALL questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

You should have a ruler, compass and protractor where required.

Total Marks :

1) Solve the inequality $3x - 4 < 26$.

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[2]

(b) Solve the inequality $9x + 5 < 77$. [2]

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(c) Write down the smallest whole number that satisfies the inequality $6x > 62$. [2]

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Smallest whole number is .....

(d) Solve the inequality $6x + 4 < 100$. [2]

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(e) Write down the greatest whole number that satisfies the inequality $3x < 81$. [2]

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2) Solve the inequality $3 - x < 7$. [2]

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(b) Solve the inequality $5x - 22 < 188$. [2]

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(c) Write down the greatest whole number that satisfies the inequality $78x < 845$. [2]

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Greatest whole number is .....

(d) Solve the inequality $2x + 3 > 35$. [2]

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3) Solve $3b + 2 > 29$.

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[2]

4) Solve the inequality $10x + 5 > 45$.

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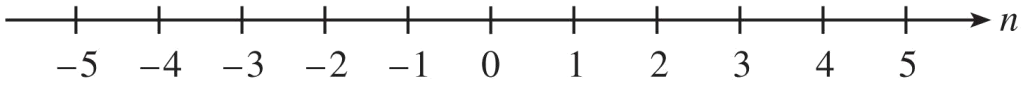
[2]

5) **(a)** Solve the inequality $5x > 3x + 11$, where x is a real number.

Answer _____ [2]

(b) Illustrate the **integer** solutions of the inequality $n - 2 > -5$ which lie on the number line given.



[2]

6) Solve the inequality $5n - 3 \geq 2n - 8$

Answer _____ [2]

7) Solve the inequality $7x < 5x - 8$

Answer _____ [2]

8) Find all integer values of n that satisfy the inequality. [3]

$$5 \leqslant 3n < 18$$

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9) Solve

$3 < 2n \leqslant 10$ where n is an **integer**.

Answer _____ [3]

10) Find all integers n that satisfy the inequality $6 < 2n < 13$. [3]

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11) Solve $15 < 2n - 3 \leqslant 22$ **where n is an integer**.

Answer _____ [3]

12) Solve $-7 < 3n - 1 \leq 8$ **where *n* is an integer.**

Answer _____ [3]

13) List the values of the **integer *n*** such that

$-4 < 3n < 9$

Answer _____ [3]

14) Solve the inequality $-6 < 3n + 1 \leqslant 10$ for **integer** values of n.

Answer n = _____ [4]

15) If $x < 1$ then $x^2 < 1$
Give a counter example to disprove this statement.

Answer _____ [1]

16)

Anwar went shopping to buy a book and some CDs.

He had exactly £60 with him.
In one shop, he bought a book costing £15 and some CDs.
Each CD cost £7.
When he paid for these items, he was given some change.

Anwar bought n CDs.
Write down an inequality which is satisfied by n.

What is the greatest possible number of CDs Anwar could have bought? [4]