| Name | Date |
|---|---|
| | |

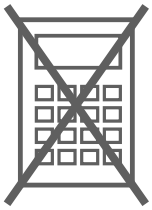
## GCSE Mathematics 9-1

# Using Inequality Symbols

## (Non-Calculator)

| Exam-Style Topic Paper | Total Marks |
|---|---|
| **Time: 48 minutes** | **/ 43** |

**Instructions**



- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name and date number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may **not** be used.

**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.
- Try to answer every question.
- Check your answers if you have time at the end.

**1** Define the following symbols:

(a) $<$

.....

**[1 mark]**

(b) $>$

.....

**[1 mark]**

(c) $\leq$

.....

**[1 mark]**

(d) $\geq$

.....

**[1 mark]**

(e) $\neq$

.....

**[1 mark]**

(f) $=$

.....

**[1 mark]**

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**2** Write the correct inequality symbol ($<$, $>$, $\leq$, $\geq$) for the following:

(a) 7 _____ 10

.....

**[1 mark]**

(b) 3 _____ $-1$

.....

**[1 mark]**

(c) $-4$ _____ 0

.....

**[1 mark]**

(d) 5 _____ 5.2

.....

**[1 mark]**

(e) $-6$ _____ $-10$

.....

**[1 mark]**

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**3** Write an inequality for the following:

(a) $x$ is greater than 5

.....

**[1 mark]**

(b) $x$ is less than or equal to 3

.....

**[1 mark]**

(c) $x$ is at least $-2$

.....

**[1 mark]**

(d) $x$ is no more than 8

.....

**[1 mark]**

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**4** Solve the inequality $2x + 3 > 7$

.....

**[2 marks]**

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**5** Solve the inequality $5x - 4 \leq 16$

.....

**[2 marks]**

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**6** Solve the inequality $3x - 5 < 10$

.....

**[2 marks]**

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**7** Solve the inequality $4x + 2 \geq 18$

.....

**[2 marks]**

**8** Solve and list all possible integer solutions

(a) $-2 < x \leq 4$

.....

**[2 marks]**

(b) $1 \leq x < 7$

.....

**[2 marks]**

(c) $-5 \leq x < 3$

.....

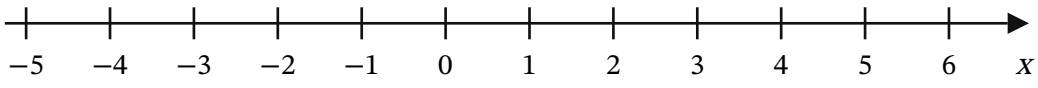
**[2 marks]**

(d) $2 < x \leq 8$

.....

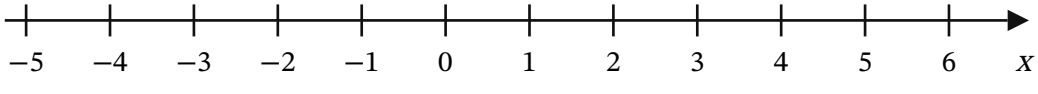
**[2 marks]**

**9** Represent the inequality $x > 3$ on the number line



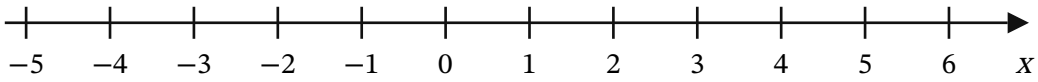

**[2 marks]**

**10** Represent the inequality $x \leq -1$ on the number line



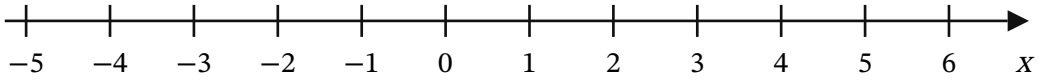

**[2 marks]**

**11** Represent the inequality $-4 < x < 5$ on the number line



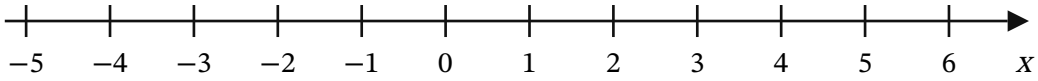

**[2 marks]**

**12** Represent the inequality $x \geq 2$ on the number line



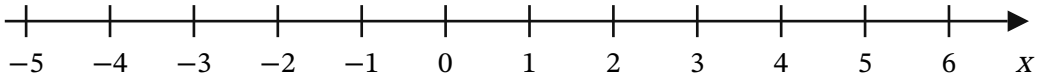

**[2 marks]**

**13** Represent the inequality $x \leq 4$ on the number line




**[2 marks]**

**14** Represent the inequality $-2 < x \leq 4$ on the number line




**[2 marks]**