

Name

Date

GCSE Mathematics 9-1

USING INEQUALITY SYMBOLS

$=$ $\neq$ $<$ $>$ $\leq$ $\geq$



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) $<$
- b) $>$
- c) $\leq$
- d) $\geq$
- e) $\neq$
- f) $=$

(6 marks)

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

- a) 7 ____ 10
- b) 3 ____ -1
- c) -4 ____ 0
- d) 5 ____ 5.2
- e) -6 ____ -10

(5 marks)

3 Write an inequality for the following:

- a) x is greater than 5
- b) x is less than or equal to
- c) x is at least -2
- d) x is no more than 8

(4 marks)

4 Solve the inequality $2x + 3 > 72x$

(2 marks)

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

.....

(2 marks)

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

.....

(2 marks)

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

.....

(2 marks)

9 Solve and list all possible integer solutions

a) $-2 < x \leq 4$

.....

(2)

b) $1 \leq x < 7$

.....

(2)

c) $-5 \leq x < 3$

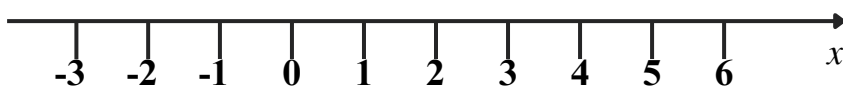
.....
(2)

d) $2 < x \leq 8$

.....
(2)

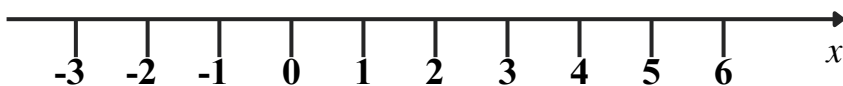
(8 marks)

10 Represent the inequality $x > 3$ on the number line



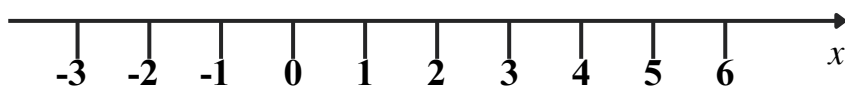
(2 marks)

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



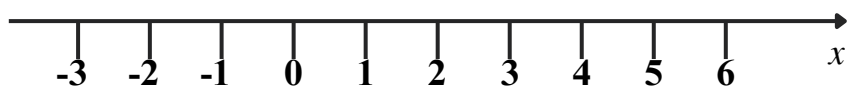
(2 marks)

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



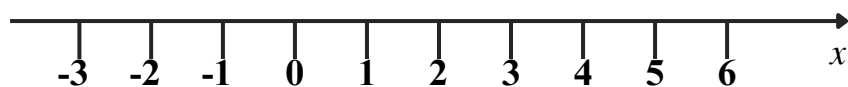
(2 marks)

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



(2 marks)

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



(2 marks)

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



(2 marks)

22 Arrange these numbers in ascending order

-7.5 4 -2.3 0 3.8

.....
(1)

23 Write the following in descending order

5.9 -1.1 3.2 -4.6 2.7

.....
(1)

24 Order the numbers from least to greatest

-9.8 4.3 -2.6 7 -5

.....
(1)

25 Put these numbers in increasing order

2.45 -0.99 1.67 -1.25 3.89

.....
(1)

26 Arrange in descending order

1.7 1.7811 1.721 1.78 1.762

.....
(1)

27 Write these numbers in ascending order

-4 0.75 -1 2.5 0.5

.....
(1)

28 Order from smallest to largest

6.9 -3.2 0 -2.1 4.5

.....
(1)

Total (7 marks)

Total Marks for Paper ____ / 28