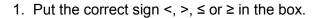
# GCSE (9-1) MATHEMATICS

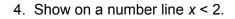
### **Topic Check In - 6.04 Algebraic inequalities**

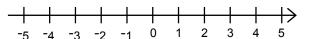


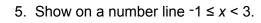


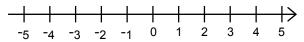


### 3. Write as an inequality, x is less than or equal to 8.









- 6. Using y to represent age in years, explain in words  $y \ge 18$ .
- 7. *x* < 2. Joe says the largest value *x* can take is 1.9. Explain why Joe is wrong.
- 8. x is an integer where  $-4 \le x < 3$ . Zoe says there are 7 possible values for x. Explain why Zoe is correct.
- 9.  $x^2 < 16$  and  $x \le -1$ . Rewrite these two inequalities as a single inequality.
- 10. A survey is conducted on the topic of reading.

  The following question and responses are used.

How many hours on average do you read per week?

Less than 2 hours Between 2 and 4 hours Over 4 hours

Using *h* to represent the number of hours, rewrite the responses using inequalities.

#### **Extension**

You are going on a field trip and need to choose where to go. The theme park costs a £100 fee plus £10 per student. The concert costs a £250 fee plus £5 per student. How many students need to go on the trip in order for the concert to be the better deal?





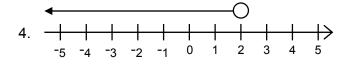
## GCSE (9-1) MATHEMATICS

### **Answers**

1. 5 > 4

2. -4 < -3

3.  $x \le 8$ 





- 6. Aged 18 or over or y is greater than or equal to 18.
- 7. Although 1.9 is a correct value within the stated range it is not the largest.

O------O 1.9 2

It could be 1.91 or 1.92, 1.99, 1.999, 1.9999999.

To get the mark it must be clear that there are values between 1.9 and 2.

- 8. The 7 values are -4, -3, -2, -1, 0, 1, and 2 (but not 3).
- 9. -4 < x < -1

10. h < 2  $2 \le h \le 4$  h > 4

### **Extension**

More than 30 people (100 + 10x > 250 + 5x)





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### GCSE (9-1) MATHEMATICS

Assessment Objective	Qu.	Topic	R	Α	G
AO1	1	Use inequality symbols.			
AO1	2	Use inequality symbols with negative numbers.			
AO1	3	Write an inequality from words.			
AO1	4	Show a simple inequality on a number line.			
AO1	5	Show an inequality range on a number line.			
AO2	6	Write an inequality in words.			
AO2	7	Understand an inequality involving decimals.			
AO2	8	Understand an inequality involving integers.			
AO3	9	Write two inequalities as a single inequality.			
AO3	10	Use inequalities to describe continuous data.			

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