FOUNDATION

4.5 Inequalities: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 On a number line, a point is shaded at 5 and an arrow continues to the right showing all numbers greater than 5. Write an inequality that matches this shading.

(Total for Question 1 is 1 mark)

2 Solve the inequality $3x < 12$. Give your answer as an inequality.

(Total for Question 2 is 2 marks)

3 Solve the inequality $x + 6 \geq 9$. Give your answer as an inequality.

(Total for Question 3 is 2 marks)

4 Solve the inequality $-x < 5$. Give your answer as an inequality and explain any change of direction of the inequality sign.

(Total for Question 4 is 3 marks)

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Mark scheme · 4.5 Inequalities: 10-minute Pack

Question 1

$x \geq 5$ or $x \geq 5$ cao (closed dot at 5)	**B1**

Answer: $x \geq 5$

Question 2

divide both sides by 3 or show equivalent method $3x/3 < 12/3$	**M1**
$x < 4$ cao	**A1**

Answer: $x < 4$

Question 3

subtract 6 from both sides or show method $x \geq 9 - 6$	**M1**
$x \geq 3$ cao	**A1**

Answer: $x \geq 3$

Question 4

multiply or divide by -1 to get $x > -5$, or show rearrangement $-x < 5 \rightarrow x > -5$	**M1**
$x > -5$ cao	**A1**
states reason: inequality direction changes when multiplying/dividing by a negative number oe	**B1**

Answer: $x > -5$; the inequality reverses because we divide by -1

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