

NAME \_\_\_\_\_ INDEX NUMBER \_\_\_\_\_

SCHOOL \_\_\_\_\_ DATE \_\_\_\_\_

## LINEAR INEQUALITIES

<i>KCSE 1989 - 2012 Form 2 Mathematics</i>	Working Space
<p>1. <b>1999 Q 2 P2</b></p> <p>Find the range of x if <math>2 \leq 3 - x &lt; 5</math></p> <p>(2 marks)</p>	
<p>2</p> <p><b>2000 Q 6 P2</b></p> <p>Find all the integral value of x which satisfy the inequalities</p> $2(2-x) < 4x - 9 < x + 11$	

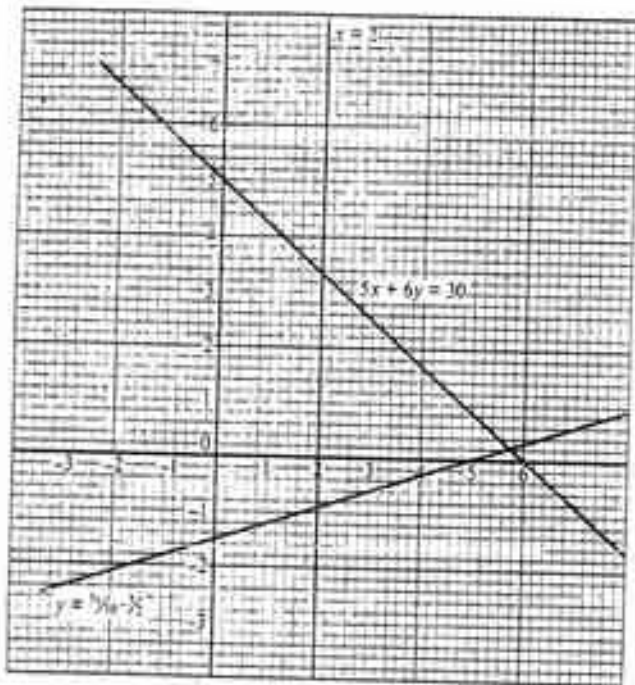
(3 marks)

Working Space

3 **2001 Q 16 P2**

The diagram below shows the graph of:

$$y = \frac{3}{10}x - \frac{3}{2}, 5x + 6y = 30 \text{ and } x = 2$$



By shading the unwanted region, determine and label the region R that satisfies the three inequalities.

$$y \geq \frac{3}{10}x - \frac{3}{2}, 5x + 6y \geq 30 \text{ and } x \geq 2$$

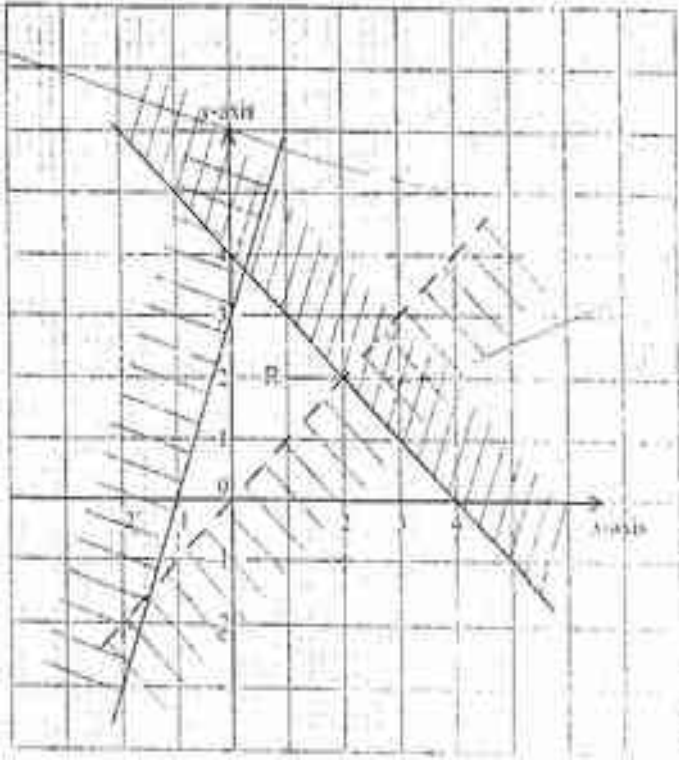
(4 marks)

4 **2002 Q 8 P1**

Solve the following inequalities and represent the solutions on a single number line:

$$3 - 2x < 5$$

$$4 - 3x \geq -8$$

	(3 marks)	Working Space
5	<p><b>2003 Q 12 P2</b></p> <p>A mixed school can accommodate a maximum of 440 students. The number of girls must be at least 120 while the number of boys must exceed 150. Taking <math>x</math> to represent the number of boys and <math>y</math> the number of girls, write down all the inequalities representing the information above.</p> <p style="text-align: right;">(3 marks)</p>	
6	<p><b>2004 Q 15 P2</b></p> <p>Form the three inequalities that satisfy the given region R.</p> 	

		Working Space
7	<p><b>2006 Q 5 P1</b></p> <p>Solve the inequality <math>3 - 2x &lt; x \leq \frac{2x+5}{3}</math> and show the solution on the number line</p> <p>(4 marks)</p>	
8	<p><b>2010 Q 5 P1</b></p> <p>The sum of three consecutive odd integers is greater than 219. Determine the first three such integers.</p> <p>(4 marks)</p>	
9	<p><b>2011 Q 4 P2</b></p>	

	<p>a) Solve the inequalities <math>2x - 5 &gt; -11</math> and <math>3 + 2x \leq 13</math>, giving the answer as a combined inequality.</p> <p style="text-align: right;">(3 marks)</p> <p>b) List the integral values of <math>x</math> that satisfy the combined inequality in (a) above (1 mark)</p>	
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