

LINEAR INEQUALITIES MARKING SCHEME

			2003Q12
1.	$\begin{aligned} 2 \leq 3 - x & \quad 3 - x < 5 \\ -1 \leq -x & \quad -x < 2 \\ 1 \geq x & \quad x > 2 \\ -2 < x \leq 1 \text{ or } 1 \geq x > -2 & \end{aligned}$ <p style="text-align: right;">1999Q2</p>	B1 B1 2 M	
2.	$\begin{aligned} 4-2x < 4x - 9 &\implies 13 < 6x \\ \underline{13} < x & \\ 6 & \\ 4x - 9 < x + 11 &\implies 3x < 20 \\ x < \underline{20} & \\ 3 & \\ \text{Integral value of } x & = (3, 4, 5, 6) \end{aligned}$ <p style="text-align: right;">2000Q6</p>	M1 B1 B1 3 M	
3.		B1 B1 B1 4 M	
	2001Q16		
4.	$\begin{aligned} -2x < 5-3 & \quad 4+8 \geq 3x \\ -2x < 2 & \quad 12 \geq 3x \\ x > -1 & \quad 4 \geq x \end{aligned}$ <p style="text-align: right;">2002Q8</p>	B1 B1 A1 3M	
5.	$\begin{aligned} x+y \leq 440 \\ y \geq 120 \\ x \geq 150 \end{aligned}$	B1 B1 B1 3 M	
6.	$\begin{aligned} y > x \\ y < -x+4 \\ 7 < 3x+3 \end{aligned}$		2004 Q15
7.	$\begin{aligned} 3-2x < x \\ 3 < 3x \\ 1 < x \\ x \leq \underline{2x+5} \\ 3x < 2x+5 \\ 3x-2x < 5 \text{ or } x < 5 \quad 1 < x \leq 5 \end{aligned}$		2006Q5
8.	$\begin{aligned} \text{Let odd integers to:} \\ x, (x+2), (x+2+2) \\ x + (x+2) + (x+2+2) > 219 \\ \text{The numbers are } 73, 75, 77 \\ 3x > 213 \\ x = 71 \end{aligned}$		2010Q5
9.	$\begin{aligned} \text{(a)} \quad 2x - 5 > -11 & \quad x > -3 \\ 3 + 2x \leq 13 & \quad x \leq 5 \\ \text{Combined } -3 < x \leq 5 & \\ \text{(b)} \quad -2, -1, 0, 1, 2, 3, 4, 5 & \end{aligned}$	B1 B1 B1 B1 4	2011Q4