Regions on Graphs

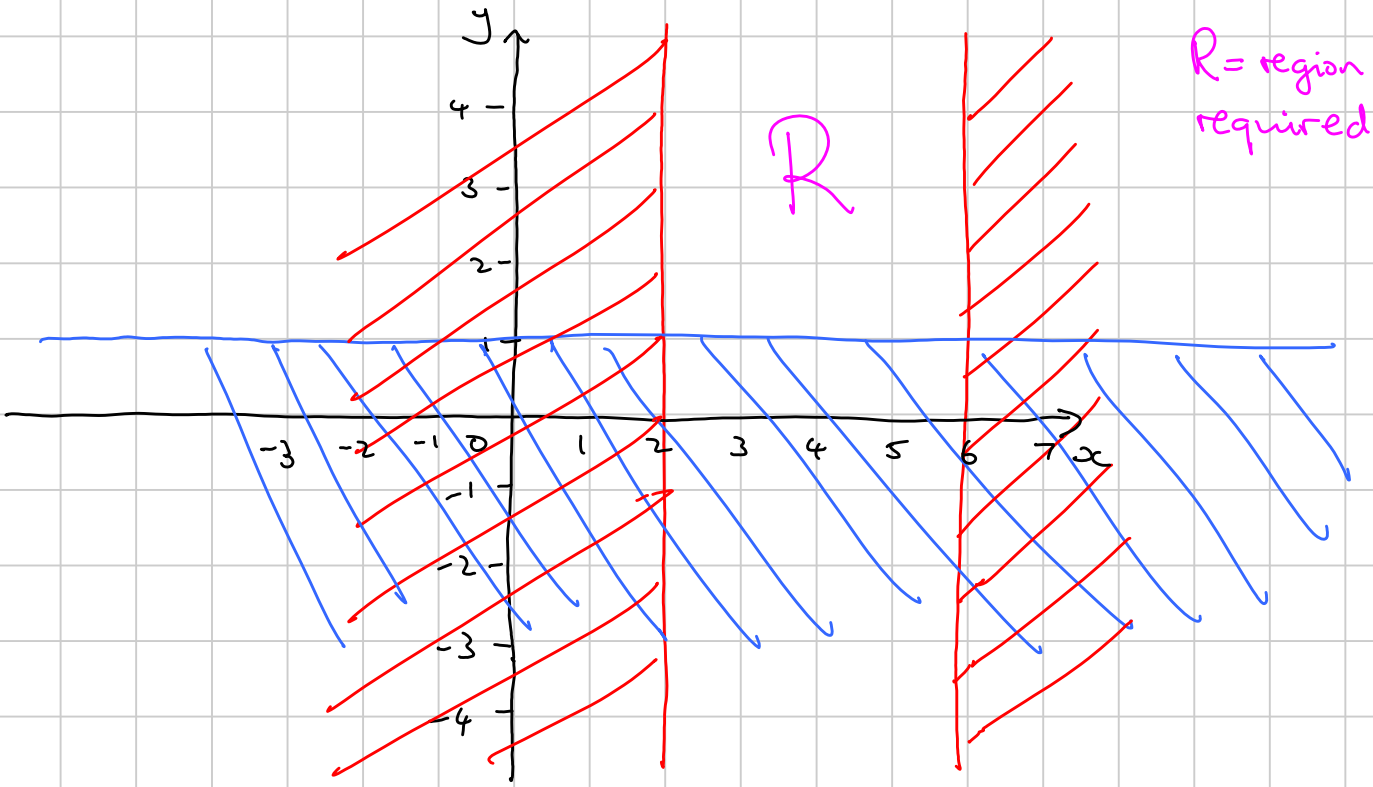
Note Title 10/05/2010

Note We will shade the regions which are **not** included in the answer.

Examples

① Show the region defined by the inequalities

$2 \leq x \leq 6$ and $y \geq 1$



② Show the region defined by the inequalities

$y \geq 2x + 1$

$x + y \leq 8$

$y \geq -2$

$x \geq -4$

First we need a table for $y = 2x + 1$

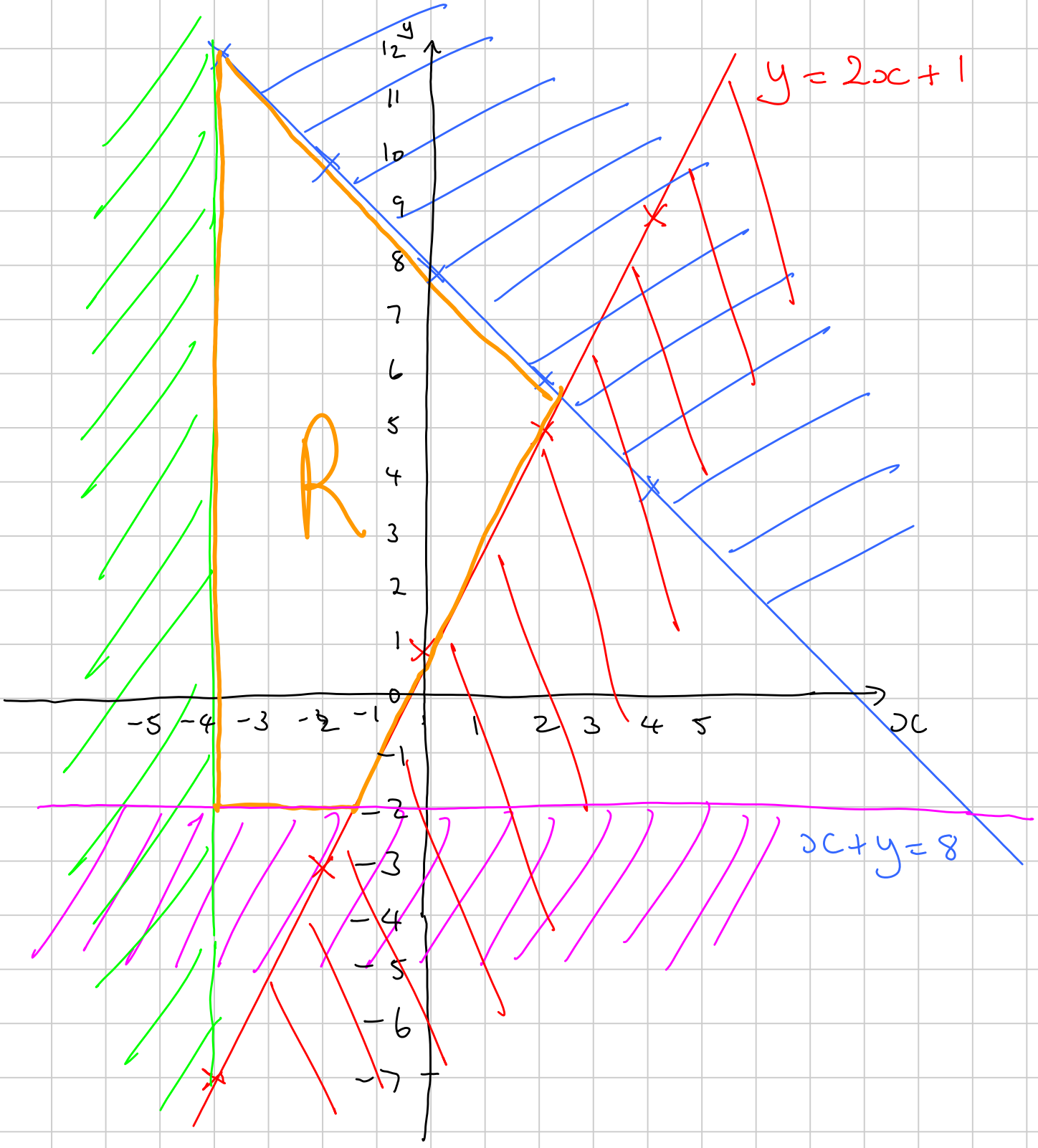
x	-4	-2	0	2	4
y	-7	-3	1	5	9

(line plotted in red)

and a table for $x + y = 8$

x	-4	-2	0	2	4
y	12	10	8	6	4

(line plotted in blue)



Note: If the inequality is $\leq$ or $\geq$, draw a solid line. If it is $<$ or $>$, draw a dashed line (- - -).