

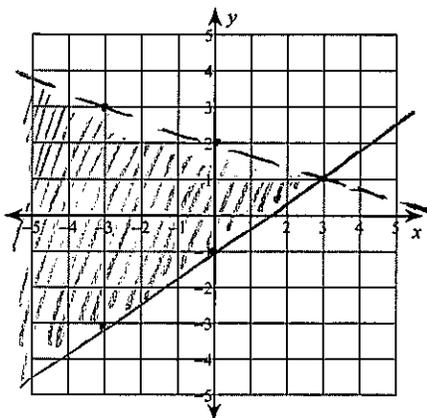
Homework 21.1

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Sketch the solution to each system of inequalities.

1) $y < -\frac{1}{3}x + 2$ ①

$y \geq \frac{2}{3}x - 1$ ②



① $m = -\frac{1}{3}$

$b = 2$

dashed

below

② $m = \frac{2}{3}$

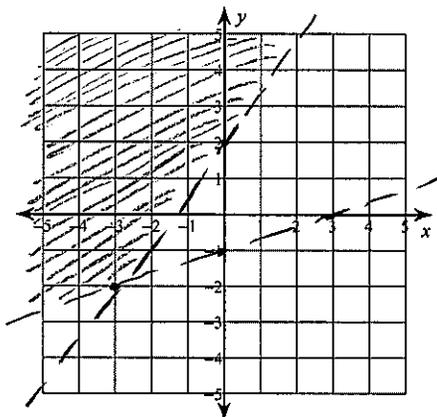
$b = -1$

Solid

above

2) $y > \frac{4}{3}x + 2$ ①

$y > \frac{1}{3}x - 1$ ②



① $m = \frac{4}{3}$

$b = 2$

dashed

above

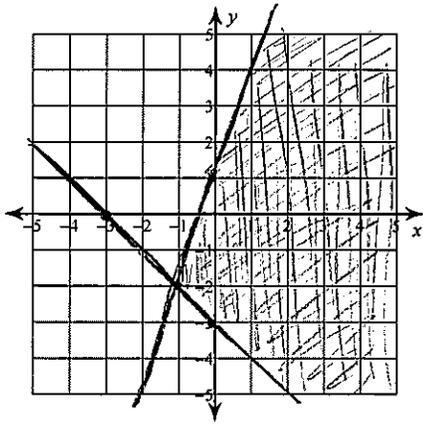
② $m = \frac{1}{3}$

$b = -1$

dashed

above

3) $x + y \geq -3$ ①
 $3x - y \geq -1$ ②

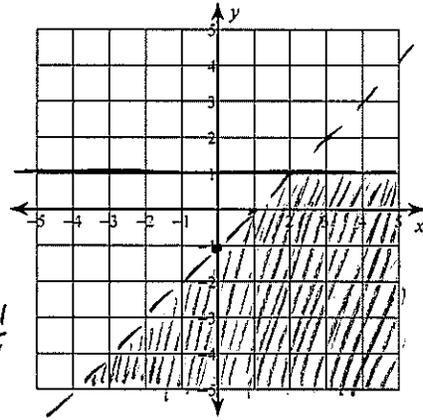


① $x + y \geq -3$
 $-x \quad -x$

$y \geq -x - 3$
 $m = -1$
 $b = -3$
 solid, above

② $3x - y \geq -1$
 $-3x \quad -3x$
 $\frac{-y}{-1} \geq \frac{-3x - 1}{-1}$
 $y \leq 3x + 1$

4) $x - y > 1$ ①
 $y \leq 1$ ②



① $x - y > 1$
 $-y > -x + 1$
 $y < x - 1$
 $m = 1$
 $b = -1$
 dashed below

①

x	y
0	-3
-3	0

 Solid
 $0 + 0 \geq -3$
 above

②

x	y
0	1
-1/3	0

 $m = 3$
 $b = 1$
 Solid
 below
 $0 - 0 \geq -1$
 below

① $x - y > 1$

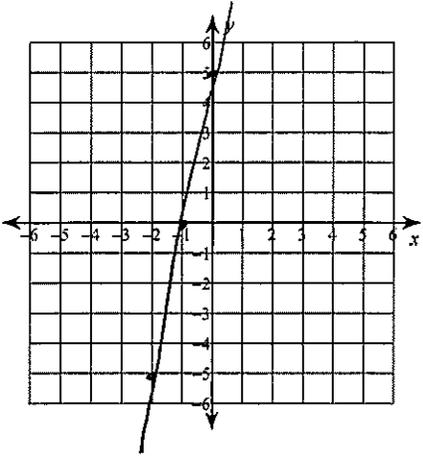
x	y
0	-1
1	0

 dashed
 $0 - 0 > 1$ below

② $y \leq 1$
 horizontal
 Line
 Solid
 below

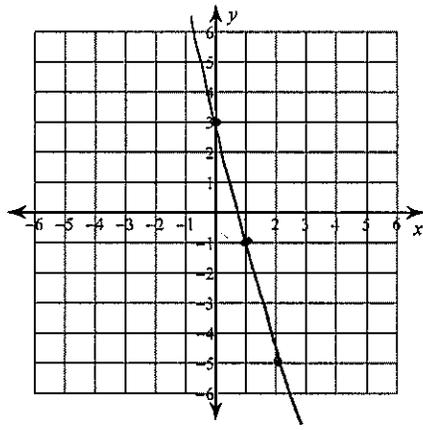
Sketch the graph of each line.

5) $y = 5x + 5$



$m = 5$
 $b = 5$

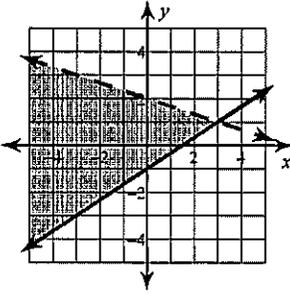
6) $y = -4x + 3$



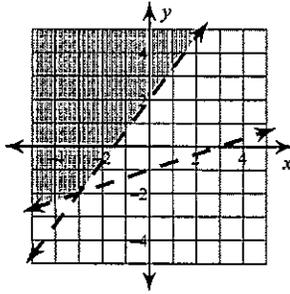
$m = -4$
 $b = 3$

Answers to Homework 21.1

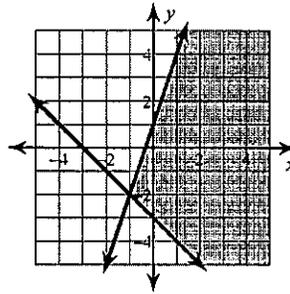
1)



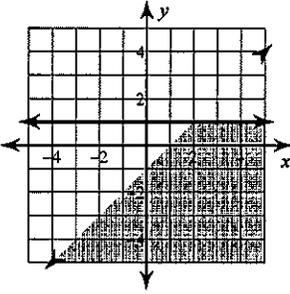
2)



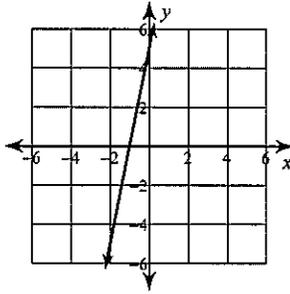
3)



4)



5)



6)

