

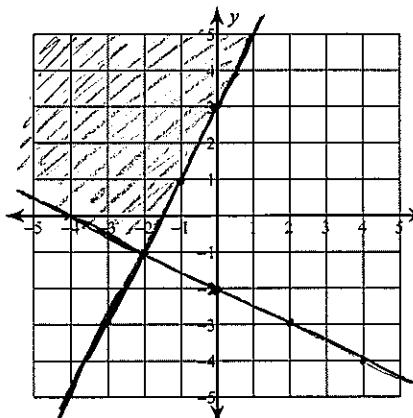
## Homework 21.3

© 2014 Kuta Software LLC. All rights reserved.

Sketch the solution to each system of inequalities.

$$1) y \geq -\frac{1}{2}x - 2 \quad (1)$$

$$y \geq 2x + 3 \quad (2)$$

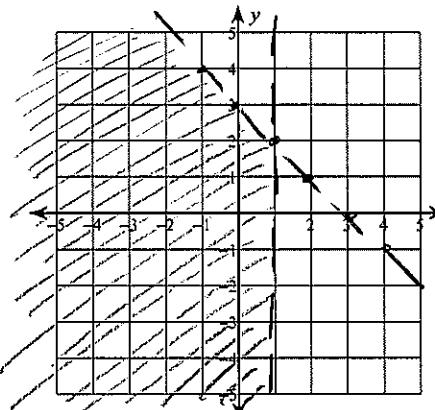


(1)  $m = -\frac{1}{2}$   
 $b = -2$   
 Solid  
 above

(2)  $m = 2$   
 $b = 3$   
 Solid  
 above

$$2) y < -x + 3 \quad (1)$$

$$x < 1 \quad (2)$$

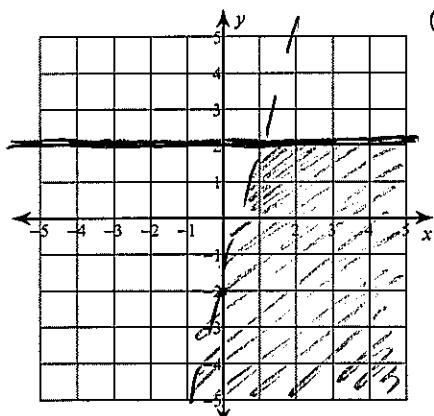


(1)  $m = -1$   
 $b = 3$   
 dashed  
 below

(2) Vertical  
 Line  
 dashed  
 Left.

$$3) 4x - y > 2 \quad (1)$$

$$y \leq 2 \quad (2)$$



(2) Horizontal  
 Line

Solid  
 below

$$(1) 4x - y > 2$$

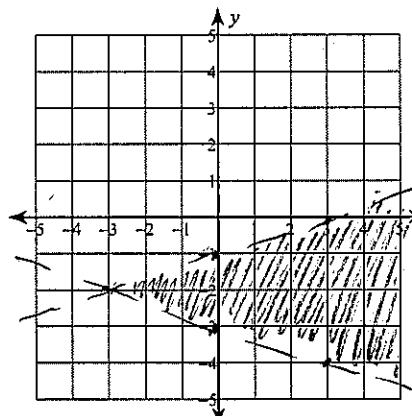
$$\begin{array}{r} -4x \\ \hline -y > -4x + 2 \end{array}$$

$$\begin{array}{r} -1 \\ \hline y < 4x - 2 \end{array}$$

$m = 4$   
 $b = -2$   
 dashed

$$4) x - 3y > 3 \quad (1)$$

$$x + 3y > -9 \quad (2)$$



$$(1) x - 3y > 3$$

$$\begin{array}{r} -x \\ \hline -3y > -x + 3 \end{array}$$

$$\begin{array}{r} -3 \\ \hline y < \frac{1}{3}x - 1 \end{array}$$

$m = \frac{1}{3}$  dashed  
 $b = -1$  below

$$(2) x + 3y > -9$$

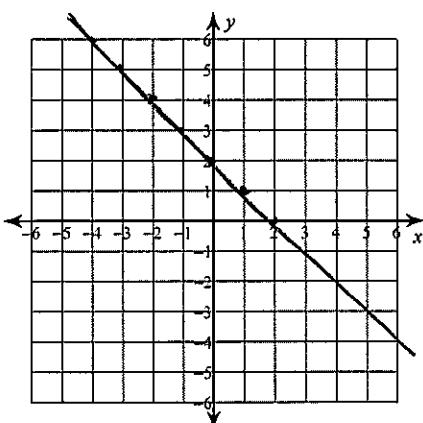
$$\begin{array}{r} -x \\ \hline 3y > -x - 9 \end{array}$$

$$\begin{array}{r} 3 \\ \hline y > -\frac{1}{3}x - 3 \end{array}$$

$m = -\frac{1}{3}$  dashed  
 $b = -3$  above

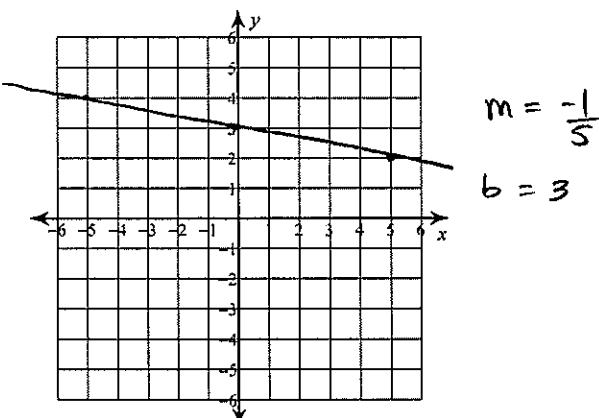
Sketch the graph of each line.

5)  $y = -x + 2$



$$m = -1$$
$$b = 2$$

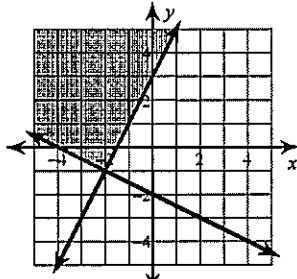
6)  $y = -\frac{1}{5}x + 3$



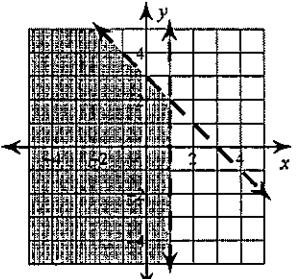
$$m = -\frac{1}{5}$$
$$b = 3$$

### Answers to Homework 21.3

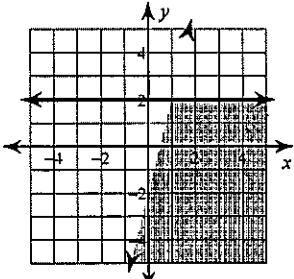
1)



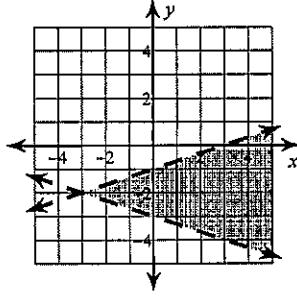
2)



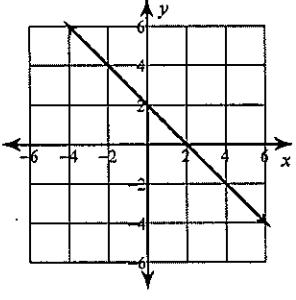
3)



4)



5)



6)

