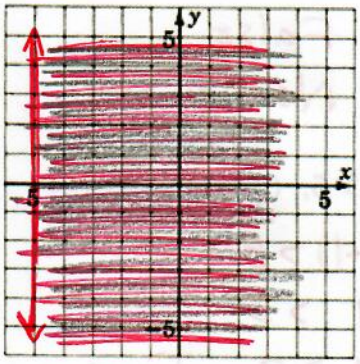
ALGEBRA 1
WS 6-5

Name KEY
Date

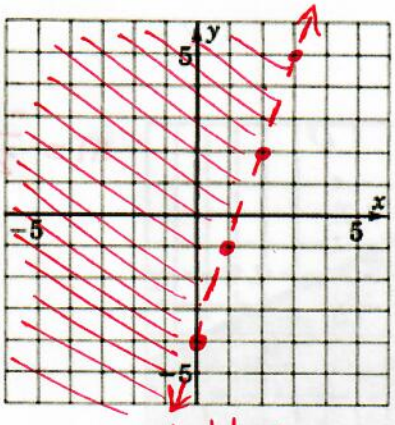
Graph each inequality. Show work and rewrite inequalities when necessary.

solid
1. $x \geq -5$



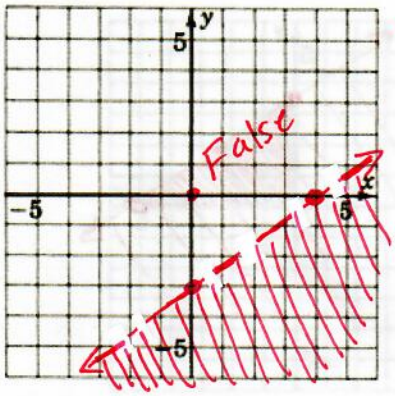
dotted
3. $y > 3x - 4$

$m = 3$
$b = -4$



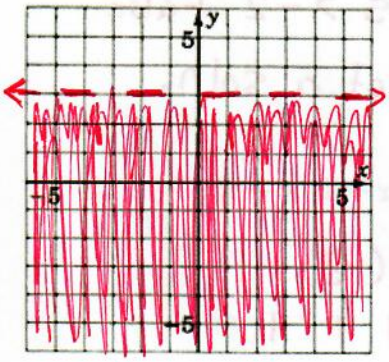
dotted
5. $3x - 4y > 12$

x-int (y=0)	y-int (x=0)
$3x = 12$	$-4y = 12$
$x = 4$	$y = -3$
$(4, 0)$	$(0, -3)$



Test Pt (0,0)
$3(0) - 4(0) > 12$
$0 > 12$
False

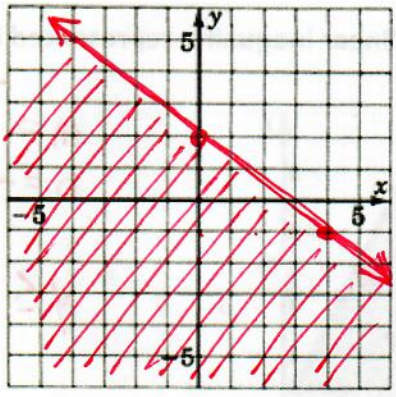
dotted
2. $y < 3$



dotted

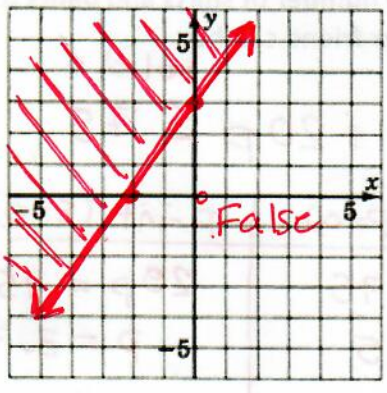
solid
4. $y \leq -\frac{3}{4}x + 2$

$m = -\frac{3}{4}$
$b = 2$



solid
6. $9x - 6y \leq -18$

x-int (y=0)	y-int (x=0)
$9x = -18$	$-6y = -18$
$x = -2$	$y = 3$
$(-2, 0)$	$(0, 3)$



Test Pt (0,0)
$9(0) - 6(0) \leq -18$
$0 \leq -18$
False

Determine if the ordered pair is a solution to the inequality.

7. $4x + 3y > -2$; $(-3, -1)$

x y

$4(-3)+3(-1) > -2$

$-12 - 3 > -2$

$-15 > -2$ False

Not a soln.

8. $y \leq 2x - 3$; $(-1, -4)$

x y

$-4 \leq 2(-1) - 3$

$-4 \leq -2 - 3$

$-4 \leq -5$ False

Not a soln.

9. $y < -3x + 1$; $(-3, 5)$

x y

$5 < -3(-3) + 1$

$5 < 9 + 1$

$5 < 10$ True

Yes, solution.

10. $2x - 4y > 5$; $(5, -1)$

x y

$2(5) - 4(-1) > 5$

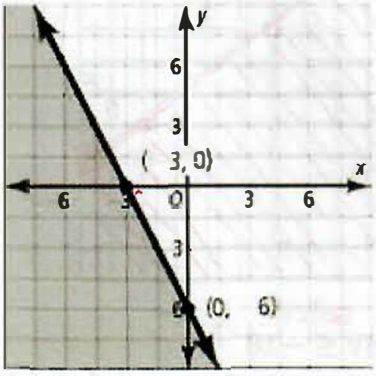
$10 + 4 > 5$

$14 > 5$ True

Yes, a solution.

Write the linear inequality represented in each graph.

11.

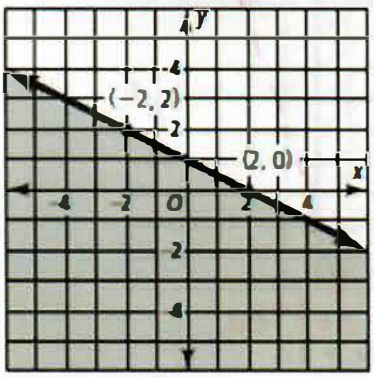


$m = \frac{-6}{3} = -2$

$b = -6$

$y \leq -2x - 6$

12.



$m = \frac{-1}{2}$

$b = 1$

$y \leq -1/2x + 1$

13. A friend has \$75 to buy some new shirts and pants. Each shirt s costs \$15, and each pair of pants p costs \$20.

a. Write an inequality that represents the number of shirts and pants that your friend can buy.

Solid

$15s + 20p \leq 75$

S-int ($P=0$)	P-int ($S=0$)
$15s = 75$	$20p = 75$
$s = 5$	$p = 3.75$

b. Graph the inequality that you wrote in (a)

Test Pt (0,0)

$15(0) + 20(0) \leq 75$

$0 \leq 75$

T