

Name Key
 8A: Algebra 1

Date _____
 Period _____

Homework

1) Brian said that the union of the graph of $x > 2$ and the graph $x < 2$ consist of every point in the coordinate plane. Do you agree with Brian? Explain why or why not.

Dotted means not equal

NO, 2 is NOT included b/c $2 \neq 2 + 2 \neq 2$ and $<$ and $>$ means not included

slope-intercept form

In 2-5: Transform each sentence into one whose left member is y. (~~show work~~)

2) $y - 2x > 0$
 $+2x \quad +2x$
 $\boxed{y > 2x}$

3) $\frac{5x}{2} > \frac{2y}{2}$
 $\frac{5}{2}x > y$ or $\boxed{y < \frac{5}{2}x}$

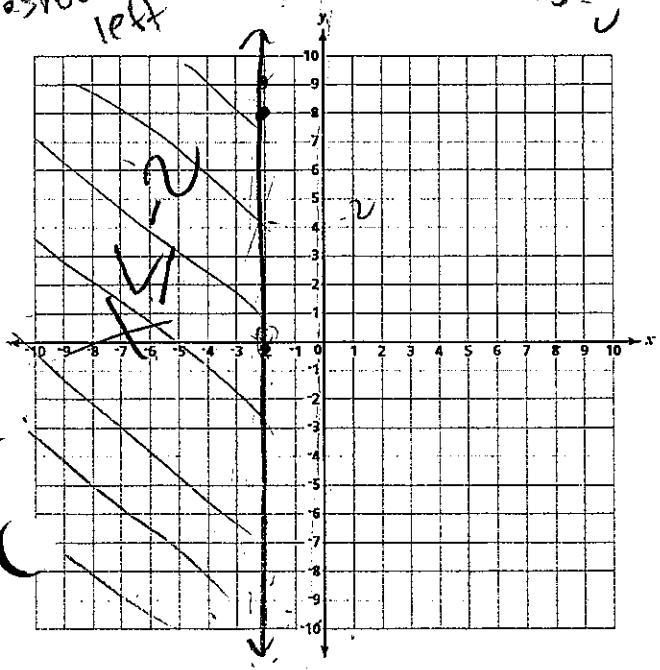
4) $3x - y \geq 4$
 $-3x \quad -3x$
 $\frac{-y}{-1} \geq \frac{-3x + 4}{-1}$
 $\boxed{y \leq 3x - 4}$

5) $4y - 3x \leq 12$
 $+3x \quad +3x$
 $\frac{4y}{4} \leq \frac{3x + 12}{4}$
 $\boxed{y \leq \frac{3}{4}x + 3}$

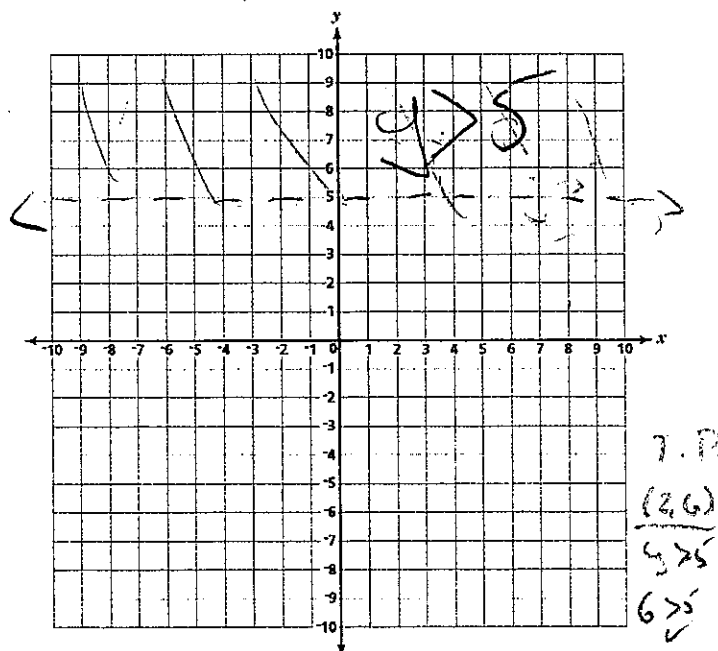
In 6-10: Graph each sentence in the coordinate plane.

6) $x \leq -2$
 • Solid
 • Shade left
 M = Undefined
 BE NO y-int

T.P. (-5, 0)
 x = -2
 -5 < -2



7) $y > 5$
 M = 2/5
 B = 5
 • Dotted
 • Shade above



$$8) y \geq \frac{1}{2}x + 3$$

$m = \frac{1}{2}$ - solid
 $B = 3$ - shade above

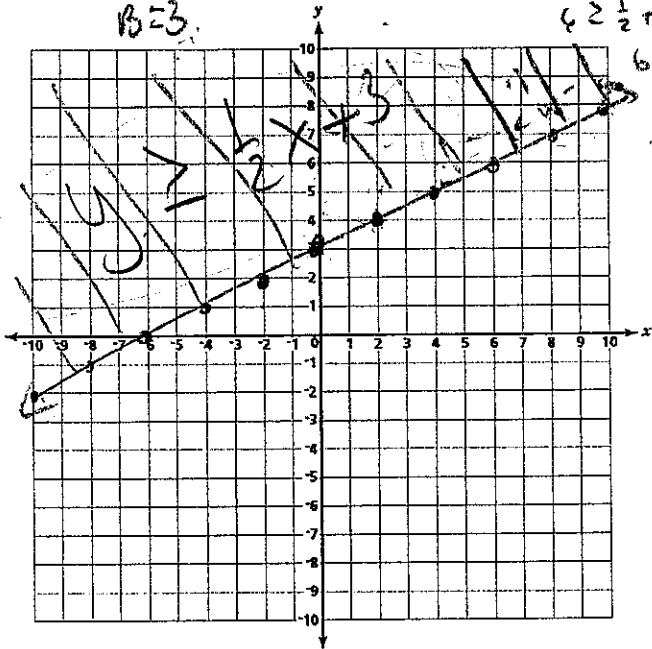
T.P.
 (1, 6)

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

$$6 \geq \frac{1}{2}(1) + 3$$

$$6 \geq \frac{1}{2} + 3$$

$$6 \geq 3\frac{1}{2}$$

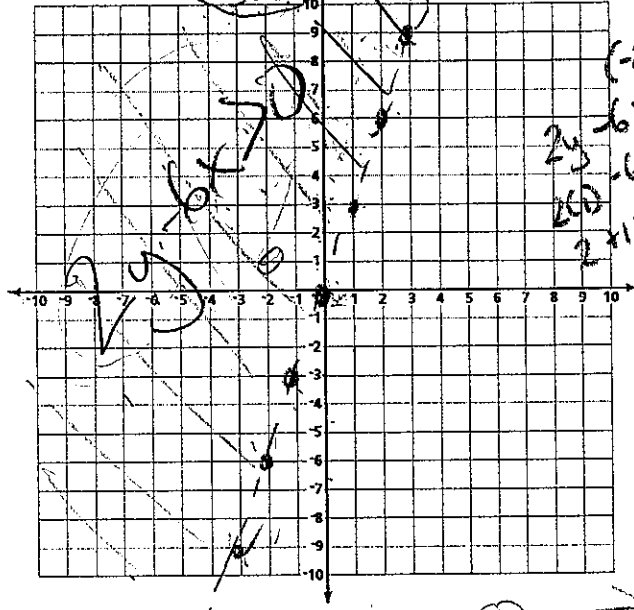


$$9) 2y - 6x > 0$$

$$\frac{2y}{2} > \frac{6x}{2}$$

$$y > 3x$$

$m = 3$ - dotted
 $B = 0$ - shade above



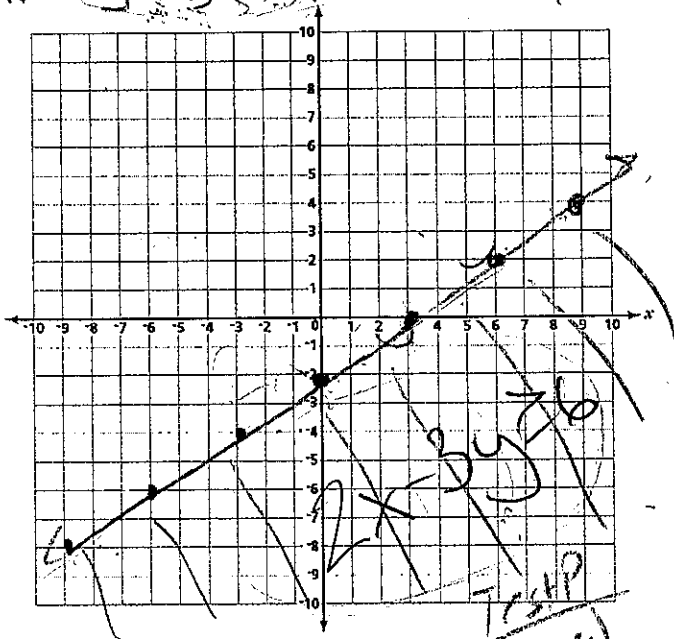
$$10) 2x - 3y \geq 6$$

$$\frac{-3y}{-3} \geq \frac{-2x + 6}{-3}$$

$m = \frac{2}{3}$ - solid
 $B = -2$ - shade below

A

$$y \leq \frac{2}{3}x - 2$$



T.P.
 (5, -4)

$$2x - 3y \geq 6$$

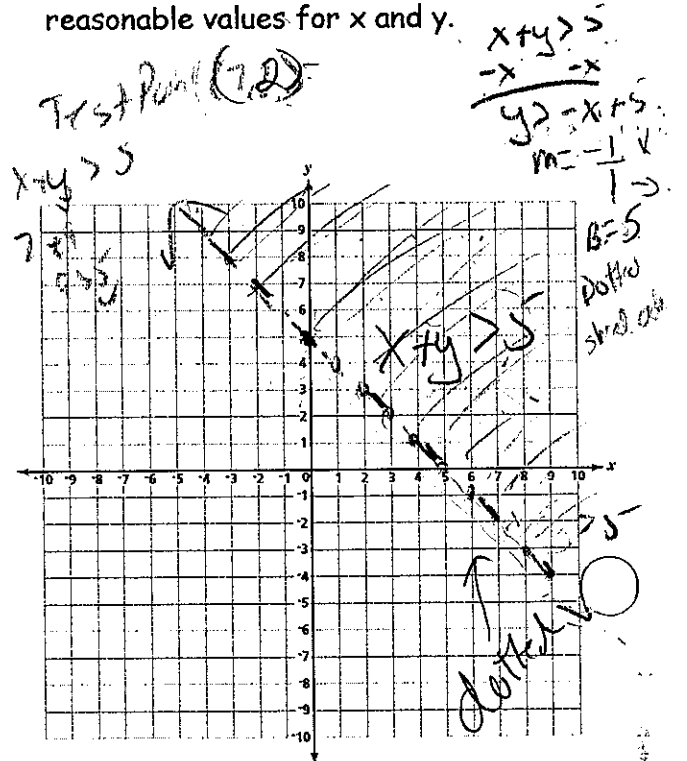
$$2(5) - 3(-4) \geq 6$$

$$10 + 12 \geq 6$$

$$22 \geq 6$$

11) At the water park, the cost of a hamburger (x) plus the cost of a can of soda (y) is greater than 5 dollars.

- Write an inequality to represent this. $x + y > 5$
- Graph your inequality
- Choose a coordinate that could be reasonable values for x and y.



T.P.
 (7, 2)

$$x + y > 5$$

$$2 + 7 > 5$$

$$9 > 5$$

$B = 5$
 dotted
 shade above