

Name Key
 8A: Algebra 1

Date _____
 Period _____

Homework

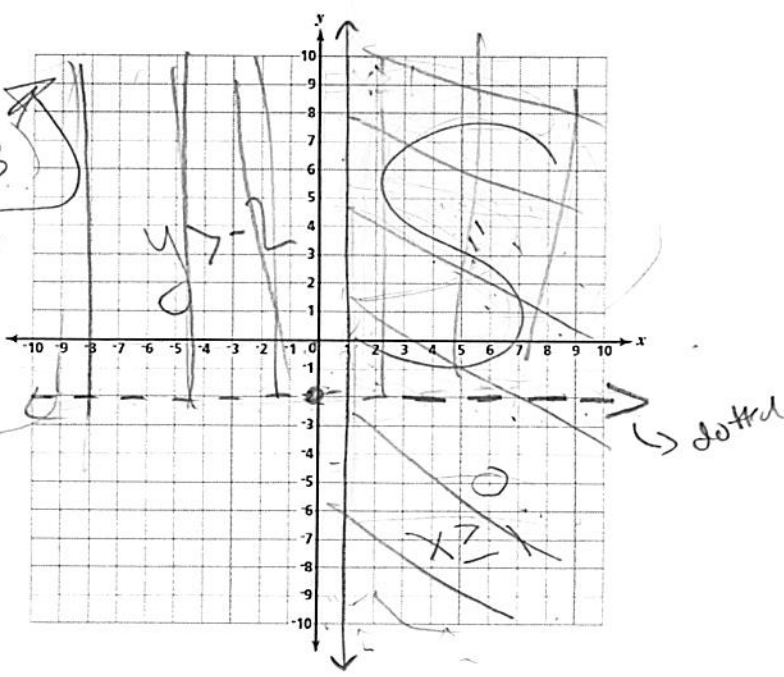
For 1-3: Graph each system of inequalities and label the solution set S. Check one solution.

1) $x \geq 1$
 $y > -2$

$x \geq 1$
 $m = \text{undefined}$
 $B = \text{NO } y\text{-int}$
 • solid
 • shade to the right
 T.P.
 (5, 1)
 $x \geq 1$
 $5 \geq 1$
 ✓

$y > -2$
 $m = \text{zero}$
 $B = 2$
 • dotted
 • shade above
 T.P.
 (6, 2)
 $y > -2$
 $2 > -2$
 ✓

S.P.
 (8, 3)
 $x \geq 1$
 $8 \geq 1$
 ✓
 $y > -2$
 $3 > -2$
 ✓

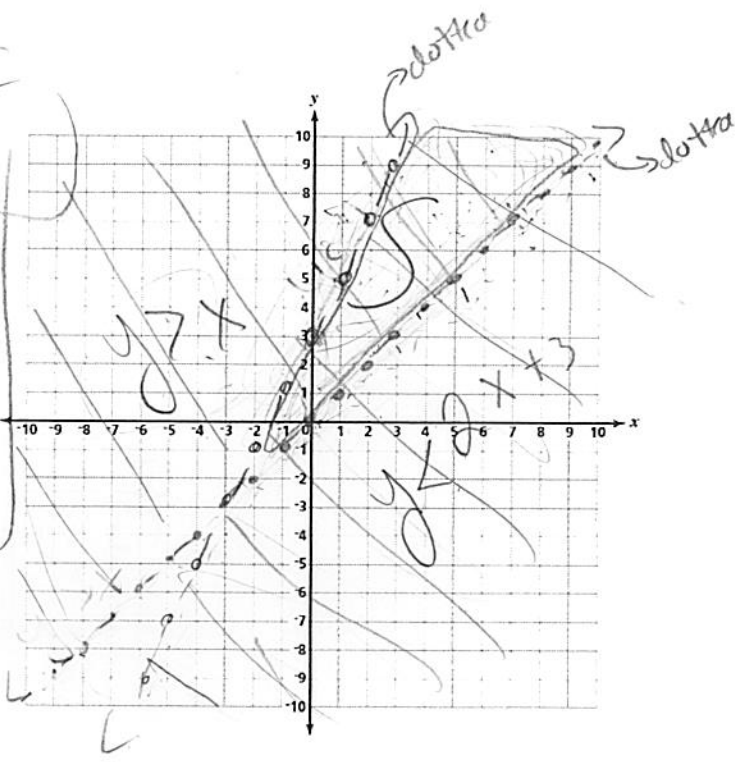


2) $y > x$
 $y < 2x + 3$

$y > x$
 $m = 1$
 $B = 0$
 • dotted
 • shade above
 T.P.
 (-4, 1)
 $y > x$
 $1 > -4$
 ✓

$y < 2x + 3$
 $m = 2$
 $B = 3$
 • dotted
 • shade below
 T.P.
 (4, -2)
 $-2 < 2(4) + 3$
 $-2 < 8 + 3$
 $-2 < 11$
 ✓

S.P.
 (4, 6)
 $y > x$
 $6 > 4$
 ✓
 $y < 2x + 3$
 $6 < 2(4) + 3$
 $6 < 8 + 3$
 $6 < 11$
 ✓



$$3) y - x \geq 5$$

$$y - 2x \leq 7$$

$$\frac{y - x \geq 5}{+x \quad -x}$$

$$y \geq x + 5$$

$m = 1$
 $B = 5$

- solid
- shade above

T.P.

$$\frac{(-6, 3)}{y - x \geq 5}$$

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

$$3 + 6 \geq 5$$

$$9 \geq 5 \quad \checkmark$$

$$\frac{y - 2x \leq 7}{+2x \quad -2x}$$

$$y \leq 2x + 7$$

$m = 2$
 $B = 7$

- solid
- shade below

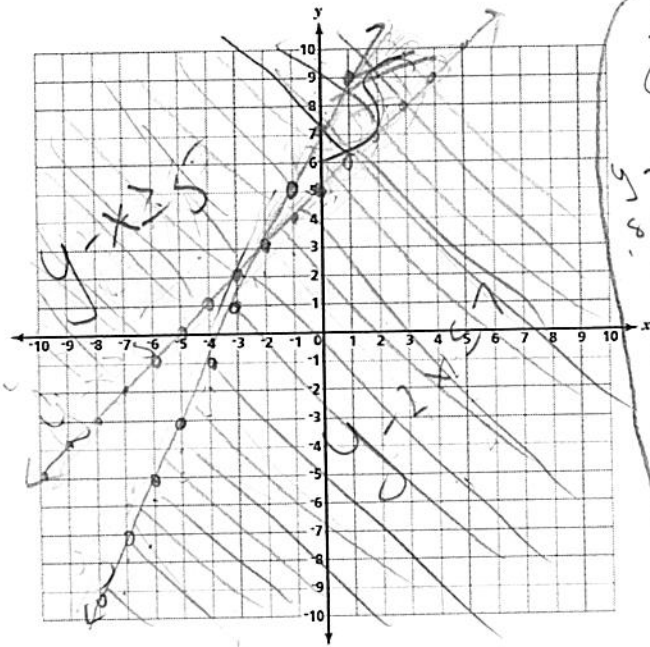
T.P.

$$\frac{(9, 0)}{y - 2x \leq 7}$$

$$0 - 2(9) \leq 7$$

$$0 - 18 \leq 7$$

$$-18 \leq 7 \quad \checkmark$$



S.P. (2, 8)

$$y - x >= 5$$

$$8 - 2 \geq 5$$

$$6 \geq 5 \quad \checkmark$$

$$y - 2x \leq 7$$

$$8 - 2(2) \leq 7$$

$$8 - 4 \leq 7$$

$$4 \leq 7 \quad \checkmark$$

4) Graph the solution set in a coordinate plane for: $2 < y \leq 6$



$$2 < y$$

$$y \leq 6$$

S.P. (0, 4)

$$2 < y \leq 6$$

$$2 < 4 \leq 6$$

$$2 < 4 \quad \checkmark$$

$$4 \leq 6 \quad \checkmark$$

$$y > 2$$

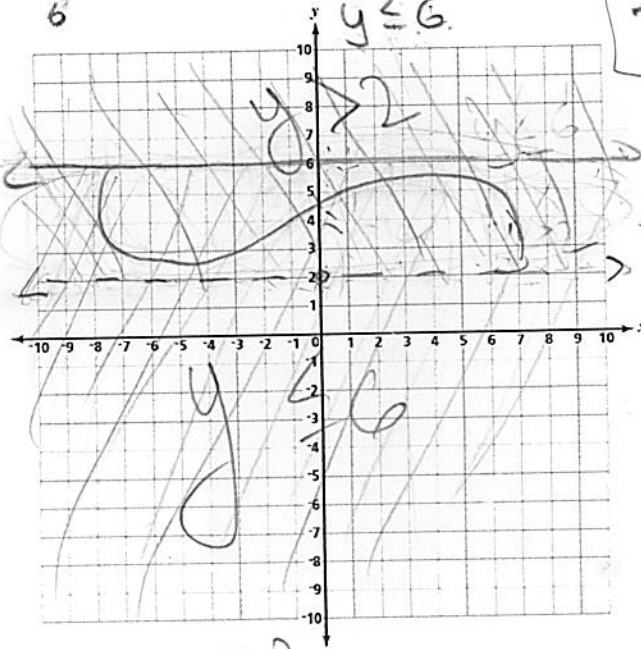
$m = 0$
 $B = 2$

- Dotted
- shade above

T.P.

$$\frac{(2, 4)}{y > 2}$$

$$4 > 2 \quad \checkmark$$



$$y \leq 6$$

$m = 0$
 $B = 6$

- solid
- shade below

T.P.

$$\frac{(2, 4)}{y \leq 6}$$

$$4 \leq 6 \quad \checkmark$$

S.P.

$$\frac{(3, 4)}$$