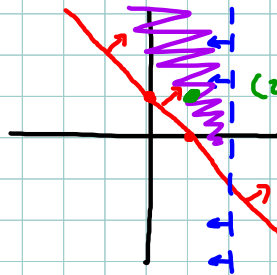


6.3 Homework Pg. 317-319 1ac, 4acd, 6, 7, 10

1a) $x+y \geq 2$ $y = -x+2$
 $x < 4$ $x = 4$

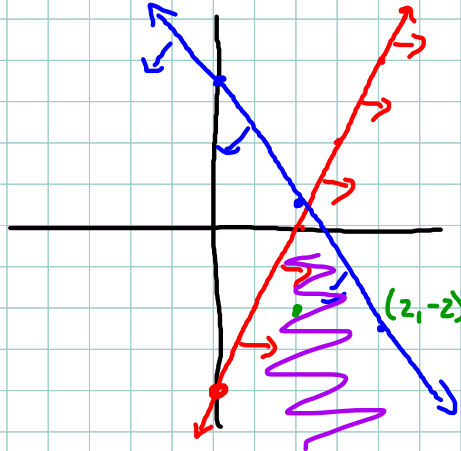
$x+y \geq 2$ $(0,0)$ x
 $x < 4$ $(0,0)$ \checkmark



Check (2,2)

$2+2 \geq 2 \rightarrow 4 \geq 2 \checkmark$
 $2 < 4 \rightarrow \checkmark$

c) $2x-4 \geq y$ $y = 2x-4$
 $2y+3x \leq 7$ $2y = -3x+7$
 $y = -\frac{3}{2}x + \frac{7}{2}$



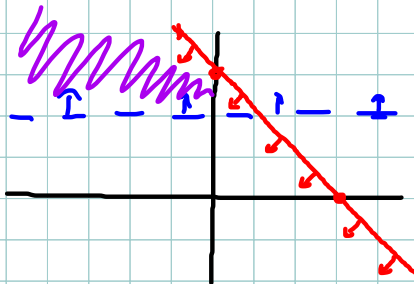
check (2,-2)

$2(2)-4 \geq -2$
 $0 \geq -2$

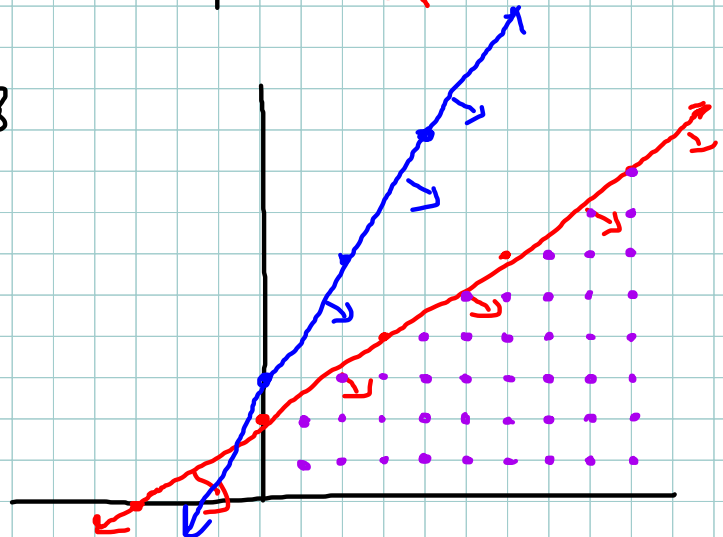
$2(-2)+3(2) \leq 7$
 $-4+6 \leq 7$
 $2 \leq 7 \checkmark$

(2,-2) \checkmark

4a) $\{(x,y) \mid x+y \leq 3, x \in \mathbb{R}, y \in \mathbb{Y}\}$
 $y = -x+3$
 $\{(x,y) \mid y > 2, x \in \mathbb{R}, y \in \mathbb{R}\}$



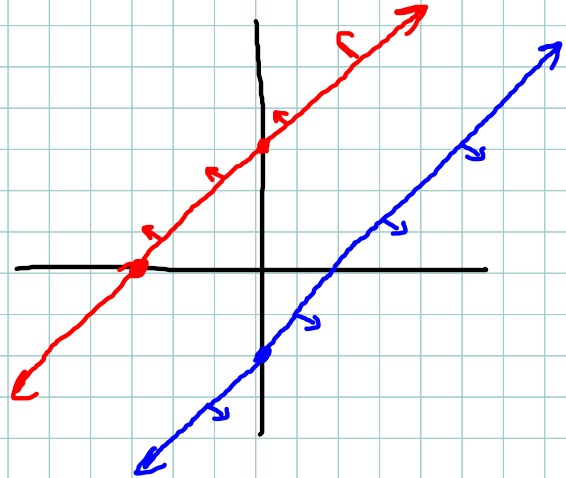
d) $\{(x,y) \mid 3y-2x \leq 6, x \in \mathbb{N}, y \in \mathbb{N}\}$
 $y = \frac{2}{3}x + 2$
 $\{(x,y) \mid 2y-3x \leq 6, x \in \mathbb{N}, y \in \mathbb{N}\}$
 $y = \frac{3}{2}x + 3$



$$4d) \{(x, y) \mid y - x \geq 3, x \in \mathbb{R}, y \in \mathbb{R}\}$$

$$\{(x, y) \mid y + 2 \leq x, x \in \mathbb{R}, y \in \mathbb{R}\}$$

No Solution



7. a) Let x = egg salad Let y = ham and cheese

$$x + y \leq 450, x \in \mathbb{W}, y \in \mathbb{W}$$

$$2x \leq y, x \in \mathbb{W}, y \in \mathbb{W}$$

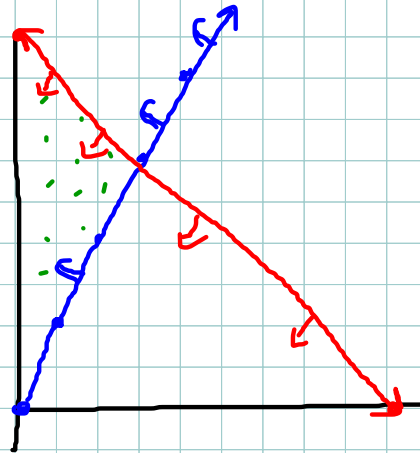
b) $x \in \mathbb{W}, y \in \mathbb{W}$ (No part sandwich)

$$c) y = -x + 450$$

$$y = 2x$$

$$d) (10, 440)$$

$$(100, 350)$$



$$7) 9x + 18y < 18 \rightarrow 18y = -9x + 18 \rightarrow y = -\frac{1}{2}x + 1$$

$$3x - 6y \leq 18 \rightarrow -6y = -3x + 18 \rightarrow y = \frac{1}{2}x - 3$$

b) i - No

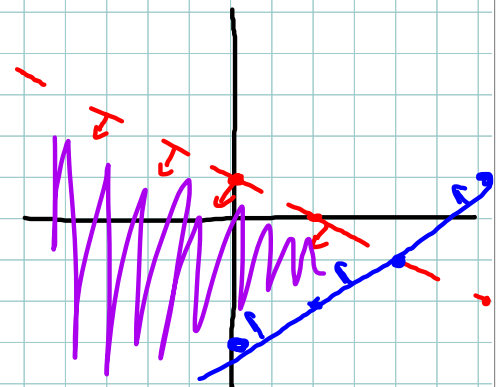
iv - No

ii - No

v - Yes

iii - Yes

vi - Yes



10) Let x = young songs
Let y = old songs

$$x \geq 2y \quad y = \frac{1}{2}x$$

$$x + y \leq 12 \quad y = -x + 12$$

$$3x + 3y \leq 36$$

$$(8, 3) \rightarrow [24, 9]$$

$$(7, 2) \rightarrow [21, 6]$$

$$(9, 3) \rightarrow [27, 9]$$

