Mathematician Mrs. Talley

Yasmine has two jobs- Hype pays $8 per hour and housecleaning pays $5 per hour. Yasmine needs to earn at least $160 to pay her cell phone bill. She can only work 18 hours at Hype. Because of school and her vast social life, Yasmine can work a total of no more than 25 hours each week at her two jobs.

Give five viable solutions for this situation.

Thinking Space

#hours Hype	# hours housecleaning		
18	7	179	18(8) + 7(5)
17	8	176	17(8) + 8(5)
16	9	173	16(8) + 9(5
15	10	170	15(8) + 10(5)
14	11	167	14(8) + 11(5)

Organized Solutions

# hours hype	# hours housecleaning
18	7
17	8
16	9
15	10
14	11

Equation Space

- ① $x \leq 18$
- ② $x + y \leq 25$
- ③ $8x + 5y > 160$

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x	y
0	32
20	0

$8(0) + 5y > 160$

$\frac{5y}{5} > \frac{160}{5}$

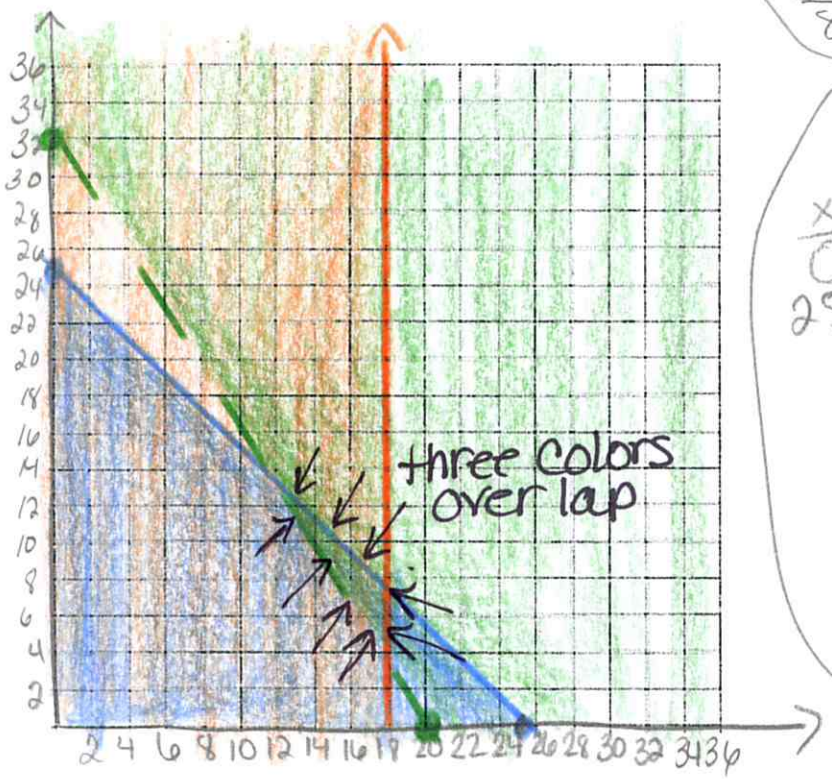
$y > 32$

$8x + 5(0) > 160$

$\frac{8x}{8} > \frac{160}{8}$

$x > 20$

Graphing Space



② $x + y \leq 25$

x	y
0	25
25	0

$0 + y \leq 25$

$y \leq 25$

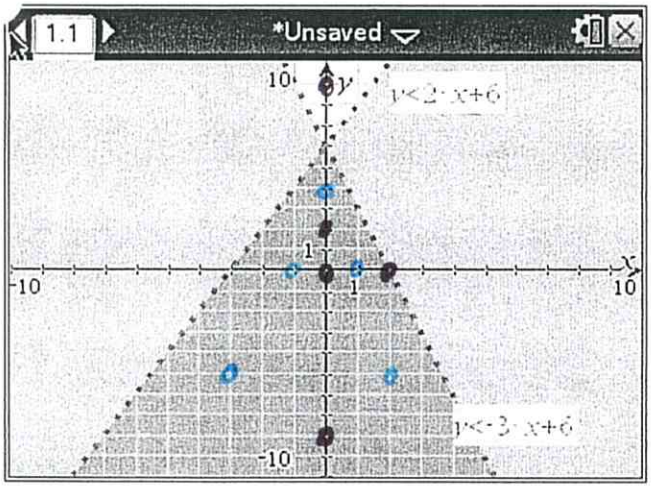
$x + y \leq 25$

$x + (0) \leq 25$

$x \leq 25$

2. $y < -3x + 6$

$y < 2x + 6$



A. Choose all of the ordered pairs that are solutions for the system.

(0,2) (0,0) ~~(2,0)~~ (0, -9) ~~(0,9)~~

B. Write 5 additional solutions to the system of linear inequalities (if any).

(-3,5) (-1,0) (0,4) (1,0) (2,5)