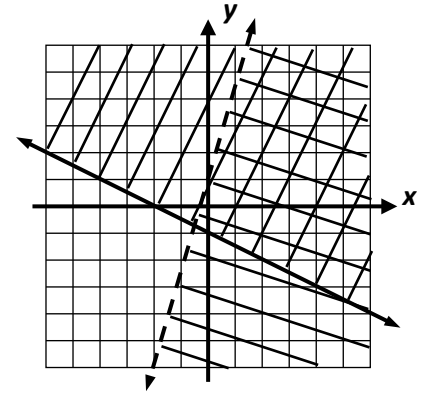


1. Which of the following points is a solution to the system of inequalities shown below?

- |                  |            |             |  |
|------------------|------------|-------------|--|
| $y > x + 1$      | (1) (3, 5) | (3) (1, -2) |  |
| $y \leq -2x + 7$ | (2) (1, 3) | (4) (2, 3)  |  |

2. A system of inequalities is shown graphed below. Which of the following points lies in the solution set of this system?

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

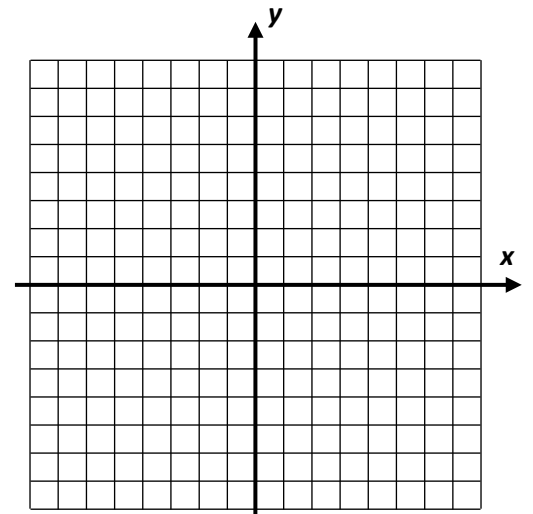


3. Consider the system of inequalities shown below.

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

$$y \leq -x + 6$$

- (a) Is the origin, (0, 0), part of the solution set of the system?  
Determine without first graphing.
- (b) Graph the solution to the system of inequalities. Then, state one point that lies in the set and one that doesn't.

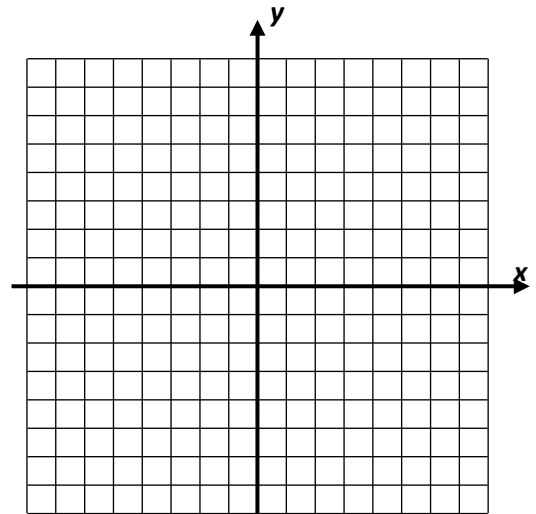


\*4. Sketch the solution to the system of inequalities shown below:

$$y + 2x < 6$$

$$x \leq 2$$

State a point that lies in the solution set:



R1. If  $A = 3x^2 + 4x - 2$  and  $B = x^2 - 5x + 6$ , find the value of  $A + B$

R2. It takes a snail 500 hours to travel 15 miles. At the same rate, how long will it take the snail to travel 6 miles?

R3. Aaron was solving an equation that his teacher put on the board. Leow is his work.

[line 1]  $4(x - 1) + 3 = 18$

[line 2]  $4(x - 1) = 15$

[line 3]  $4x - 1 = 15$

[line 4]  $4x = 16$

[line 5]  $x = 4$

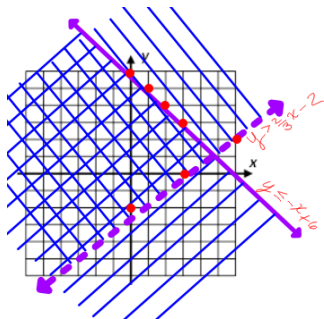
Identify the property that he used incorrectly going from *line 2* to *line 3*.

\*R4. Which could be a value for  $x$ ?  $4x - 30 > -3x + 12$

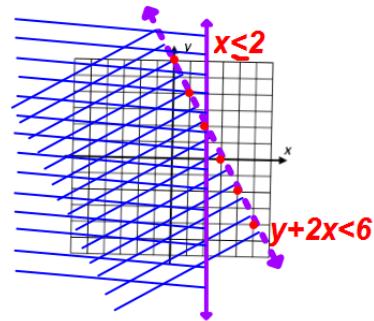
- (1) -2            (2) 5            (3) 6            (4) 12

\*R5. During its first week of business, a market sold a total of 108 apples and oranges. The second week, five times the number of apples and three times the number of oranges were sold. A total of 452 apples and oranges were sold during the second week. Determine how many apples and how many oranges were sold the *first* week.

1. (2)
2. (4)
3. (a) Yes,  $0 > -2$  and  $0 \leq 6$   
 (b) ONE example In  $(-2, 2)$   
 ONE example Out  $(7, 0)$



4. ONE example  $(-1, -3)$



R1.  $4x^2 - x + 4$

R2. 200 hours

R3. Distributive

R4. (4)

R5. 64 apples and 44 oranges