Warm-Up 2/22/2021

1a. What is the solution to the system of equations shown below?

$3x + 5y = -9$

$(2x + y = -34) \times -5$

$3x + 5y = -9$

$-10x - 5y = 170$

$-7x = 161$

$\frac{-7x}{-7} = \frac{161}{-7}$

$x = -23$

$3(-23)+5y=-9$

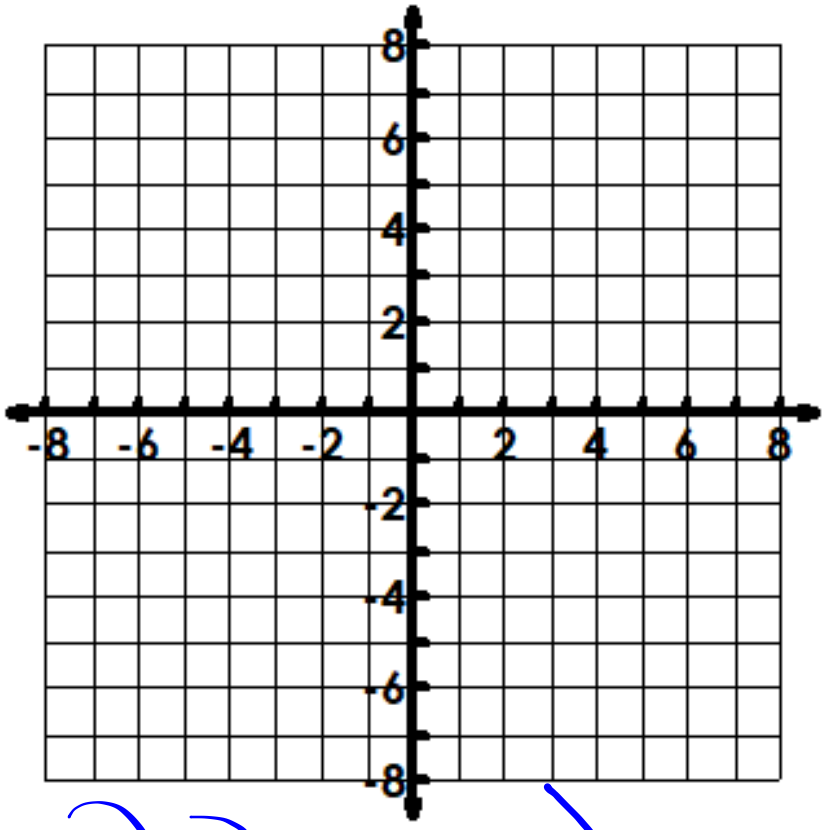
$-69+5y=-9$

$5y=69-9$

$\frac{5y}{5}=\frac{60}{5}$

$y=12$

1b. What is the graphical meaning of the solution?



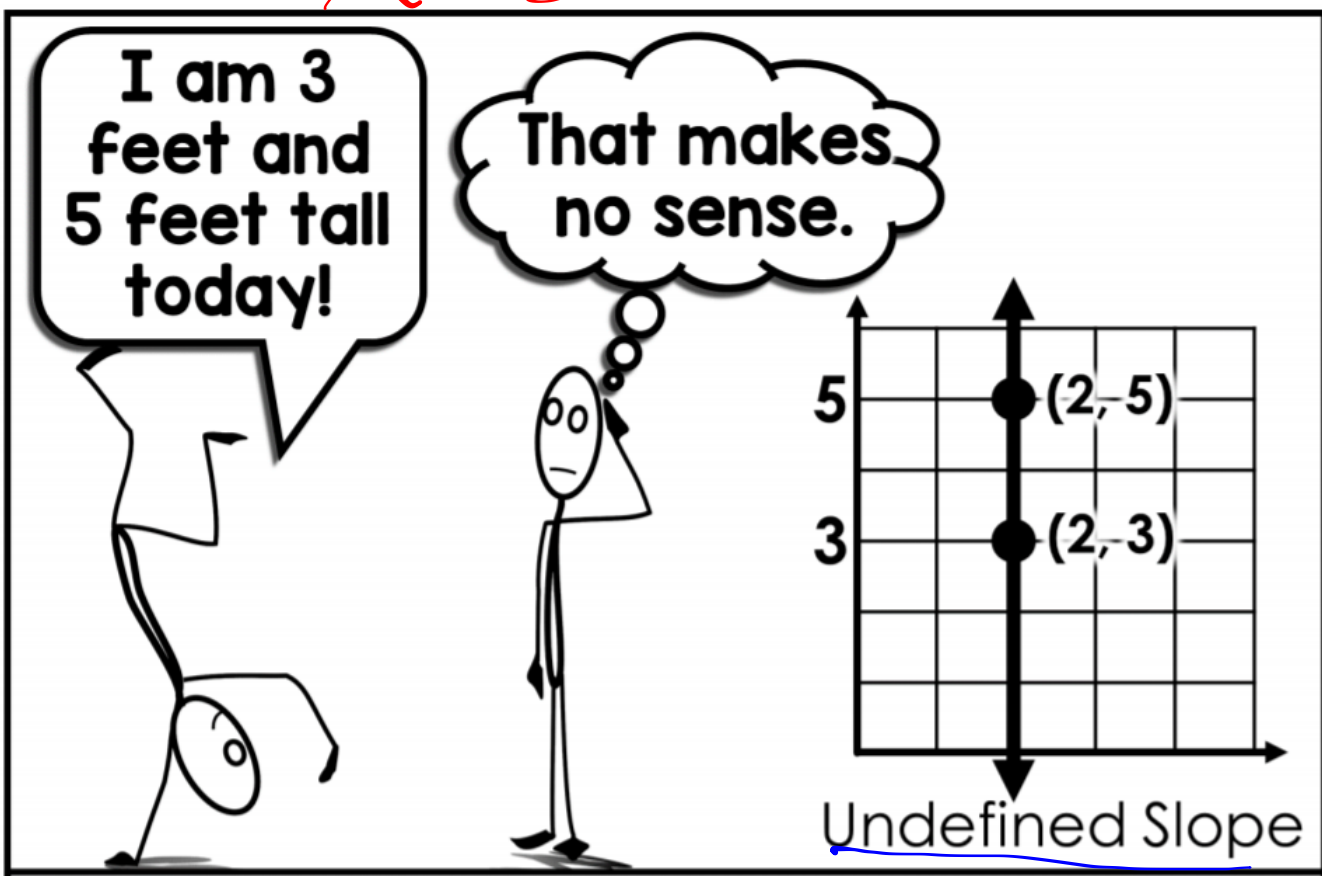
(−23, 12)

The system of equations has one solution.

The lines intersect at (−23, 12).

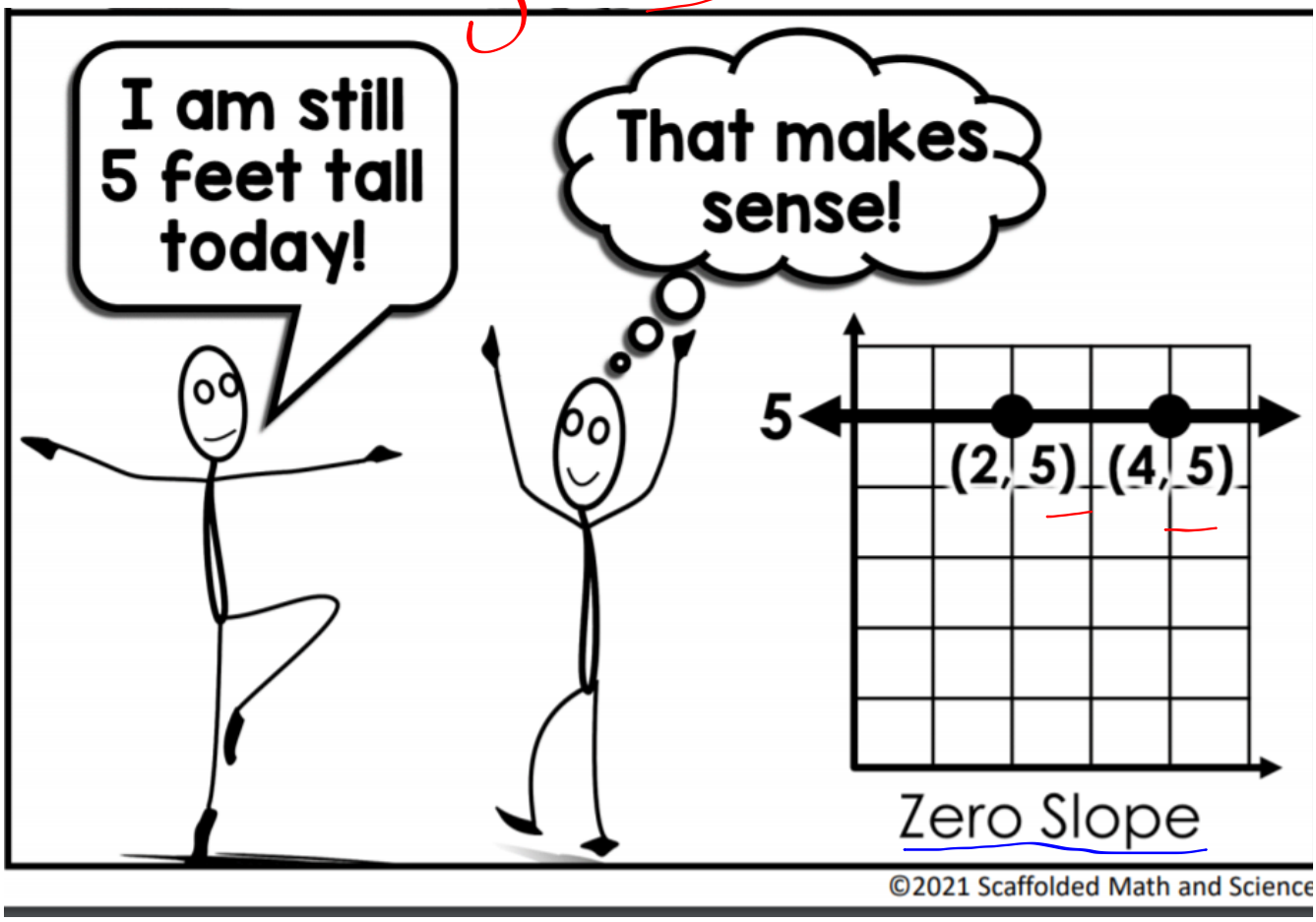
Vertical Lines - Undefined Slope

$x = 2$



Horizontal Lines - Zero Slope

$y = 5$



Agenda for Today 2/22/21

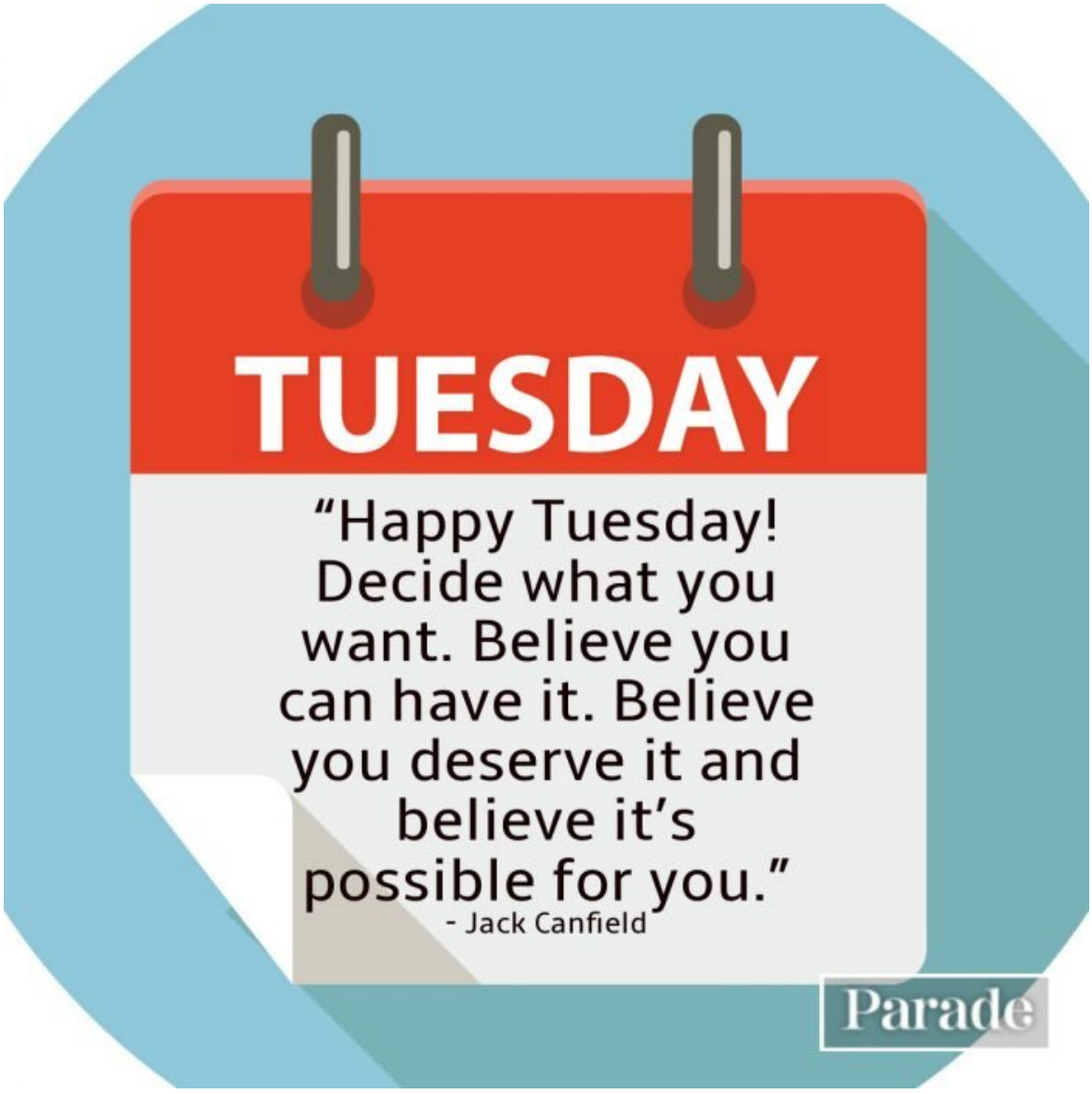
1. Warm-Up/Review

2. Complete Unit 2A Test on CTLS

3. Complete all missing Assignments on Deltamath and Edpuzzle

4. Watch the Inequalities Videos on edpuzzle and take notes.

5. Practice graphing Inequalities on Classkick


TUESDAY
"Happy Tuesday! Decide what you want. Believe you can have it. Believe you deserve it and believe it's possible for you."
- Jack Canfield
Parade

Home Work Review 2/23/2021

Get on classkick.com Slide 3

1st Block: WYO C8R

2nd Block: 4IM SBV

3rd Block: G5N S3N

Symbol	Line	Shade
$<$	dashed	below
$>$	dashed	above
$\leq$	Solid	below
$\geq$	Solid	above

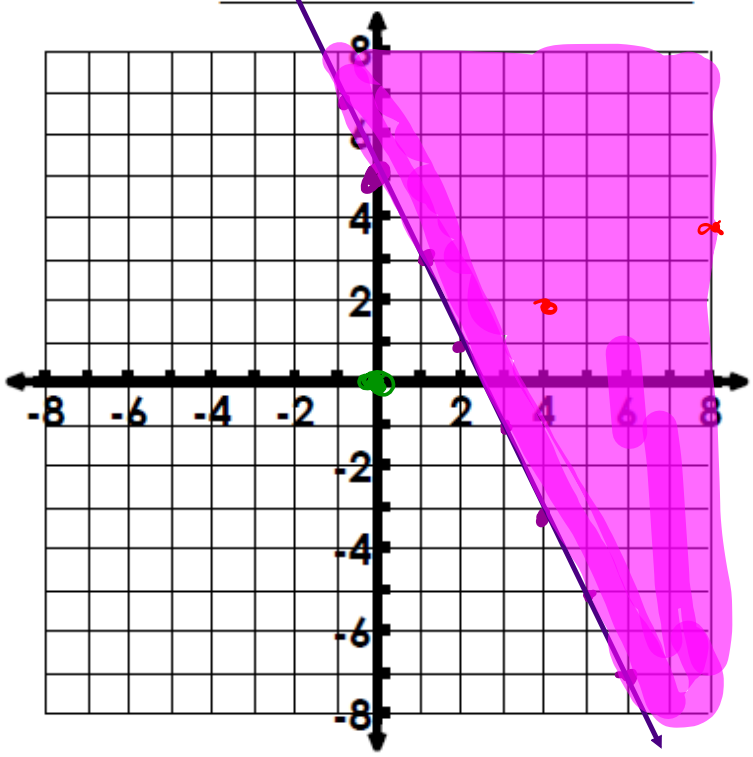
Graphing Linear Inequalities Practice

1. $y \geq -2x + 5$

Type of Line: Solid

Slope: $\frac{-2}{1}$ Y-int: (0,5)

Shade: above



Test (0,0)
x y

$0 \geq -2(0) + 5$

$0 \geq 5$ X

Solution

(8, 4)

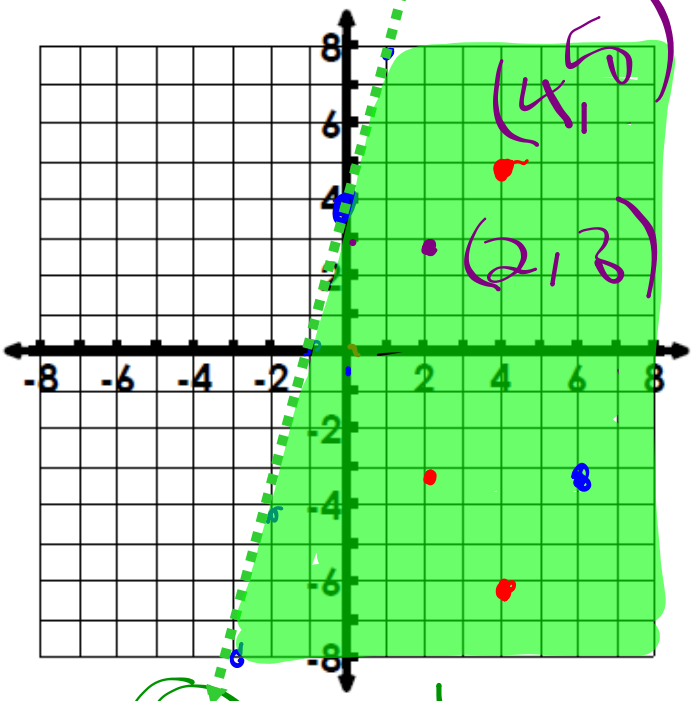
(4, 2)

2. $y < 4x + 4$

Type of Line: dashed

Slope: $\frac{4}{1}$ Y-int: (0, 4)

Shade: below



$y = mx + b$

rise / run

Solutions

(4, −6)

(2, −3)

(4, 5)

(6, −3)

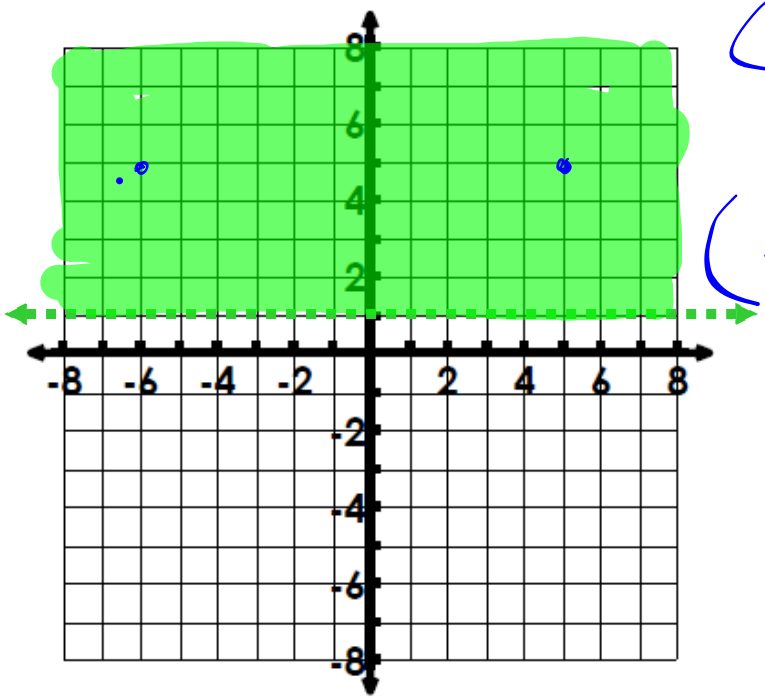
(2, 3)

3. $y > 1$

Type of Line: dashed horizontal line

Slope: Undefined Y-int: (0, 1)

Shade: above



Solutions

(-6, 5)

(5, 5)

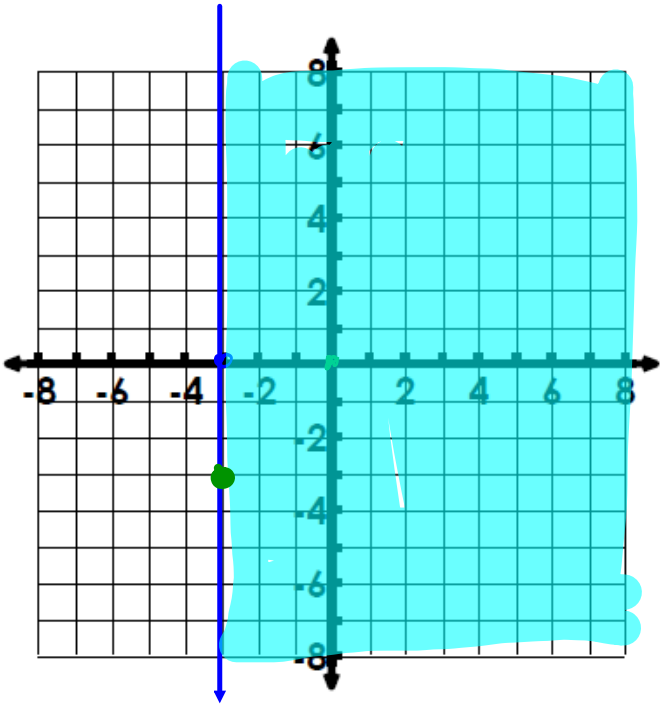
4. $x \geq -3$

$0 \geq -3$ ✓

Type of Line: Solid

Slope: 0 Y-int: none

Shade: above



Vertical line

Test Point (0,0)

$0 \geq -3$

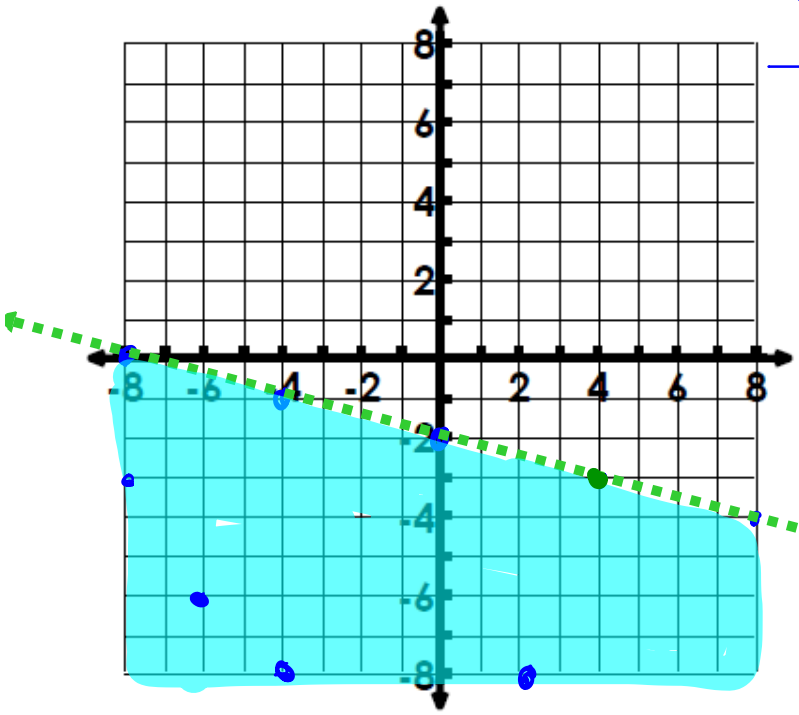
True

5. $y < -\frac{1}{4}x - 2$

Type of Line: dashed

Slope: $-\frac{1}{4}$ Y-int: (0, -2)

Shade: below



Solutions

(-6, -6)

(-4, -8)

(2, -6)

(-8, -3)

a) Any point on a solid line is a solution

b) Any point on a dashed line is NOT a solution.

6. $3x - y \geq 5$

$y = mx + b$

Type of Line: Solid

Slope: $\frac{3}{1}$ Y-int: $(0, -5)$

Shade: below

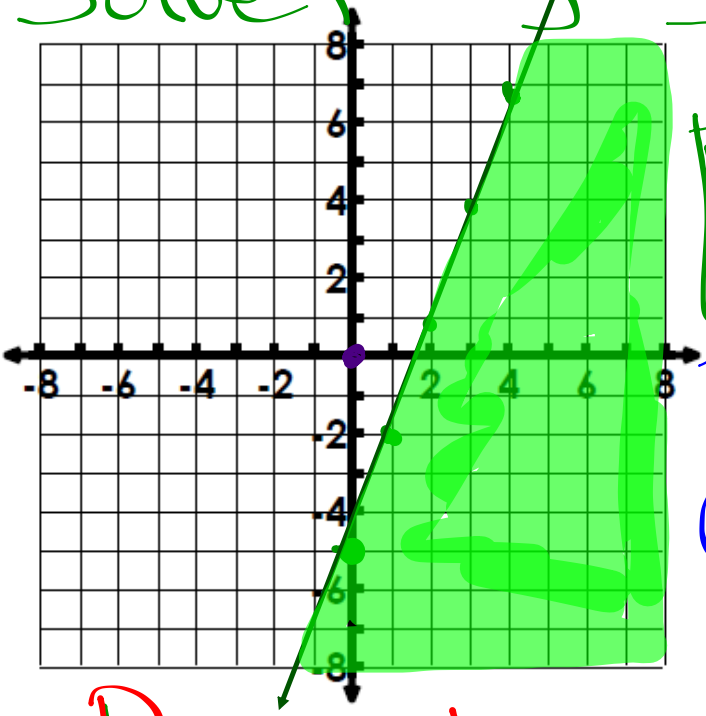
$3x - y \geq 5$

Solve for y

$-y \geq -3x + 5$

$\frac{-y}{-1} \geq \frac{-3x+5}{-1}$

$y \leq 3x - 5$



test $(0,0)$

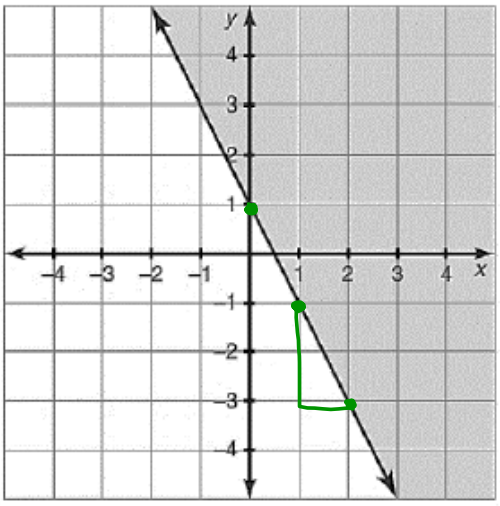
$0 \leq 3(0) - 5$

$0 \leq -5$

Remember the false!

golen Rule!

7. Name each linear inequality (think about shading, slope, y-intercept, dashed/solid line, etc).



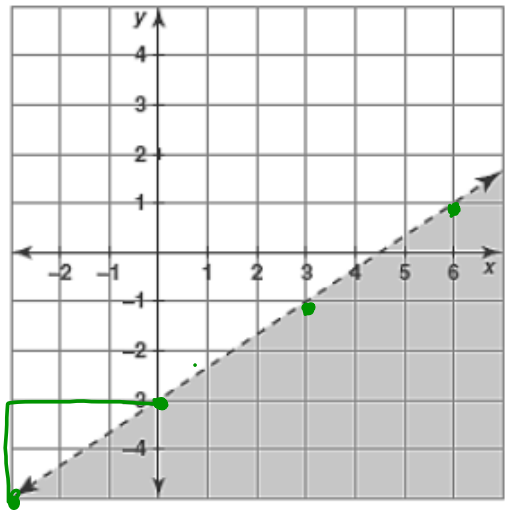
m = $\frac{2}{1}$ b = (0, 1)

Line: Dashed or Solid

Shaded: Above or Below

Inequality:

$y \geq 2x + 1$



m = $\frac{2}{3}$ b = (0, −3)

Line: Dashed or Solid

Shaded: Above or Below

Inequality:

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

8. Determine if the following points are solutions to the inequality: $y > -3x - 2$

a. (1, 3)

x, y

$3 > -3(1) - 2$

$3 > -3 - 2$

$3 > -5$

✓ True

b. (-2, 4) No

x, y

$4 > -3(-2) - 2$

$4 > 6 - 2$

$4 > 4$

false

c. (-3, 5) Not

x, y

$5 > -3(-3) - 2$

$5 > 9 - 2$

$5 > 7$

false

Review: 1. Solve for y: 8x – 4y = 16

$8x - 4y = 16$

$-4y = -8x + 16$

$\frac{-4y}{-4} = \frac{-8x}{-4} + \frac{16}{-4}$

$y = 2x - 4$

y-intercept is what is y when $x = 0$.

$y = 2(0) - 4$

$y = -4$

y-intercept $= (0, -4)$

2. Calculate the x and y intercepts: 8x – 4y = 16

x-intercept = what is the value of x when $y = 0$

$8x - 4y = 16$

$8x = 4y + 16$

$\frac{8x}{8} = \frac{4y}{8} + \frac{16}{8}$

$x = \frac{1}{2}y + 2$

$x = \frac{1}{2}(0) + 2$

$x = 2$ x-intercept $= (2, 0)$

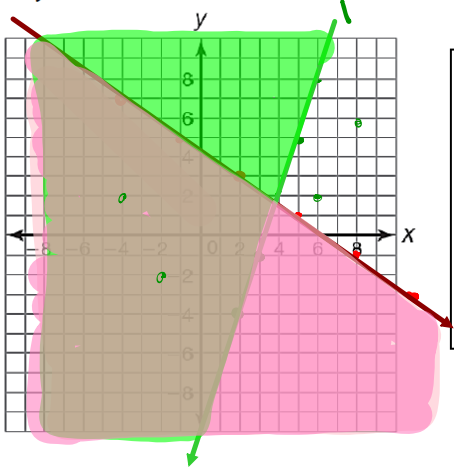
Class Practice - Graphing Systems of Inequalities

2/23/2021

3-6: Graph each inqequality. Name two points that are solutions and name two points that are not solutions.

3. $y \le -\frac{2}{3}x + 3$
$y \ge 3x - 4$

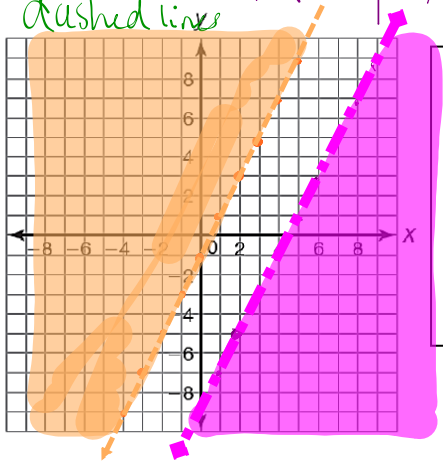
Solid lines
$m = -\frac{2}{3}$ $b = (0,3)$
$m = \frac{3}{1}$ $b = (0,-4)$



Solutions:
$(-4,-2)$
$(-6,2)$
Not Solutions:
$(4,2)$
$(6,6)$

4. $y > 2x + 3$
$y < 2x - 5$

above
$m = \frac{2}{1}$; $b = (0,3)$
below
$m = \frac{2}{1}$; $b(0,-5)$
dashed lines



Solutions:
None
Not Solutions:

5. $y < -\frac{1}{2}x + 6$

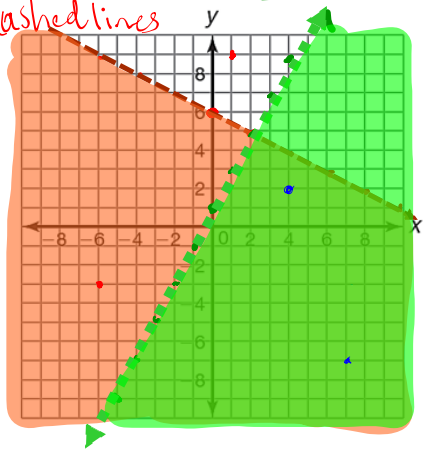
$y < 2x + 1$

shade below

dashed lines

$m = -\frac{1}{2}$ $b = (0, 6)$

$m = 2$ $b = (0, 1)$

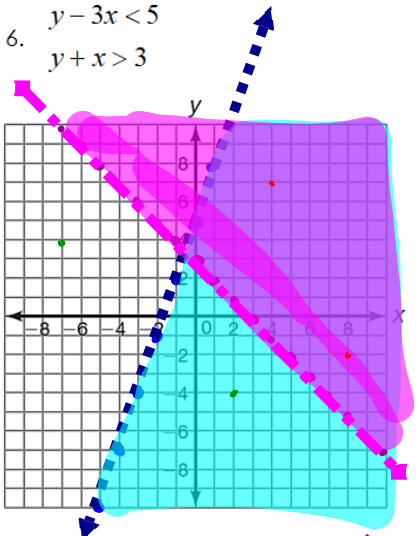


Solutions:
(4, 2)
(7, 7)

Not Solutions:
(1, 9)
(−6, −3)

6. $y - 3x < 5$

$y + x > 3$

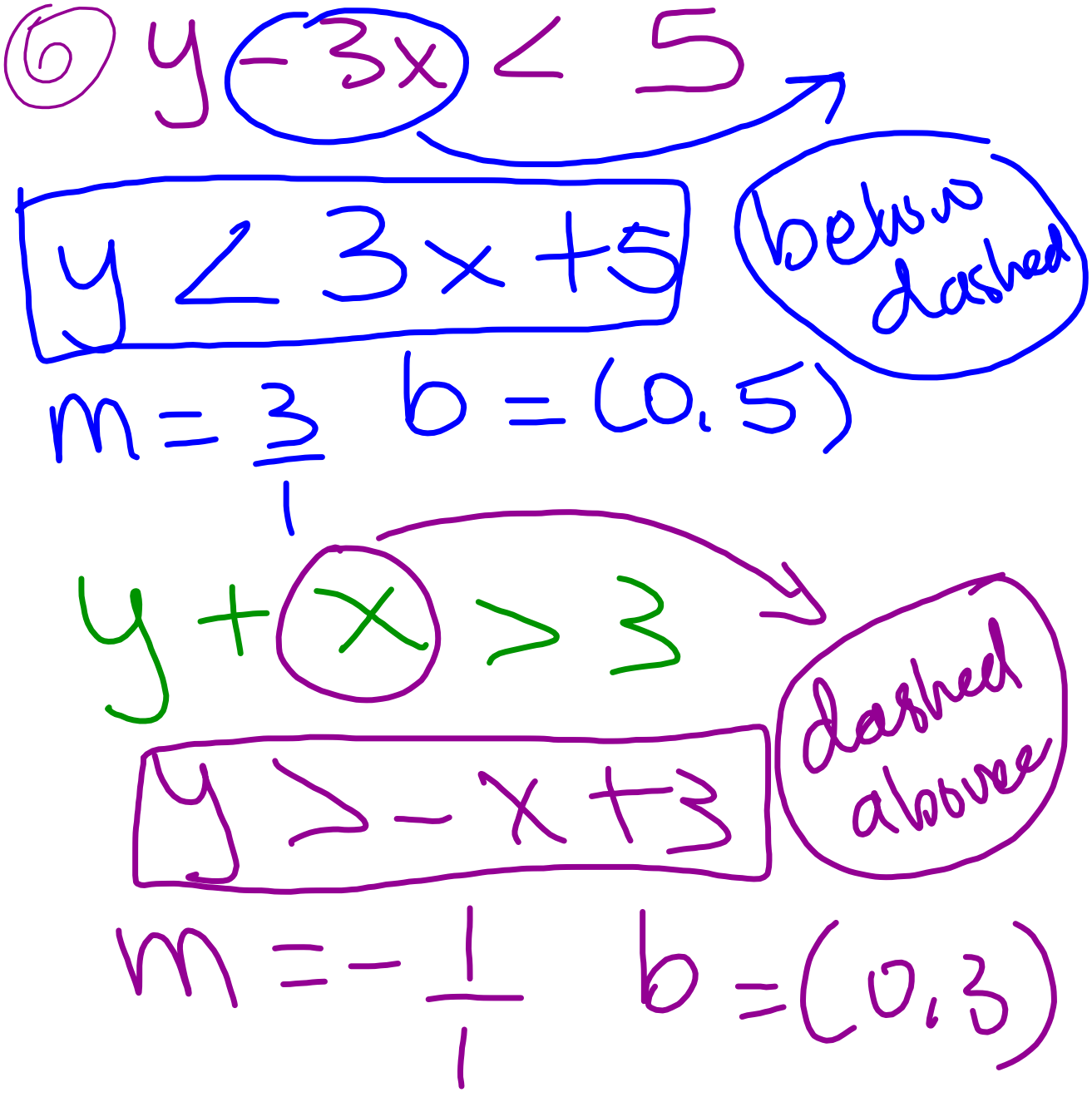


$m = \frac{3}{1}$ $b = (0, 5)$

$m = \frac{-1}{1}$ $b = (0, 3)$

Solutions:
(3, 7)
(8, −2)

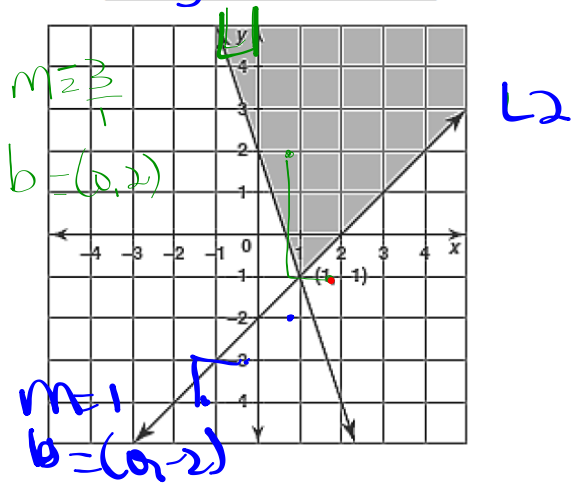
Not Solutions:
(2, −4)
(−7, 4)


6 y - 3x < 5
y < 3x + 5
below dashed
m = 3/1 b = (0, 5)
y + x > 3
y > -x + 3
dashed above
m = -1/1 b = (0, 3)

7-8: Name the system of inequalities. Then determine whether the point given is a solution to the system.

7. Line 1: $y \geq 3x+2$

Line 2: $y \geq 1x-2$



Is the point (1, -1) a solution? Prove why or why not.

(1,-1) is a solution because it is on the solid line.

Proof: $y \geq -3x+2$ ✓

$y \geq x-2$ ✓

$-1 \geq -3(1)+2$

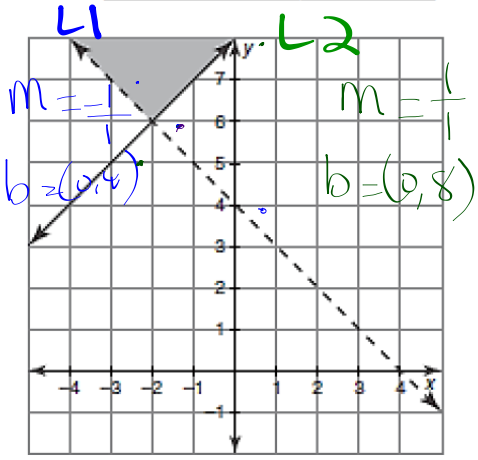
$-1 \geq -1$ ✓

$-1 \geq 1-2$

$-1 \geq -1$ ✓

8. Line 1: $y > -x+4$

Line 2: $y \geq x+8$



Is the point (-2, 6) a solution? Prove why or why not.

(-2, 6) is not solution because it lies on a dashed line.

Proof: $y > -x+4$ X

$y \geq x+8$

$6 > -(-2)+4$

$6 > 2+4$

$6 > 6$ X

$6 \geq -2+8$

$6 \geq 6$ ✓

Attachments

CODE RED LOCK DOWN PROCEDURES.pptx