

Good morning: complete the warm up in your notebooks

Find the (x,y) solution to the system

$$\begin{cases} 2(-6x + y = 22) \\ 12x - 4y = -28 \end{cases}$$

$$+ \begin{cases} -12x + 2y = 44 \\ 12x - 4y = -28 \end{cases}$$

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$$\cancel{0x} - 2y = 16$$

$$\cancel{-2y} = 16$$
$$\frac{-2}{-2} \quad \frac{16}{-2}$$

$$\underline{\underline{y = -8}}$$

$$\begin{array}{r} -6x - \cancel{8} = 22 \\ \quad \quad \quad \quad \quad +8 \quad +8 \\ \hline -6x = 30 \\ \quad \quad \quad \quad \quad -6 \quad -6 \\ \hline x = -5 \end{array}$$

$$(-5, -8)$$

Should be easy if you watched the video last night!

Reminders:

- tutoring tomorrow 4-5p
- assessment Monday
- retakes available in DS

Be fluent in mathematics....

...verbally

...numerically

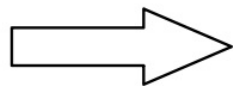
...algebraically

...graphically

What does this mean graphically?

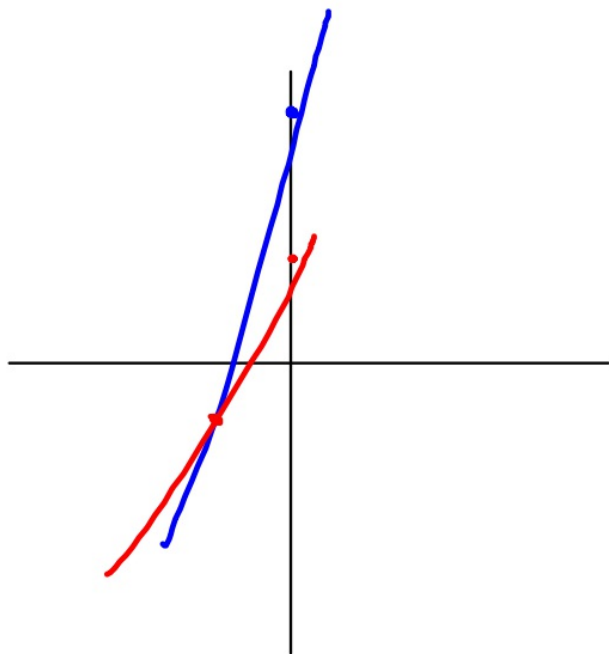
$$-6x + y = 22$$

$$12x - 4y = -28$$



•  $y = 6x + 22$

•  $y = 3x + 7$



<https://www.desmos.com/calculator/g1ancwwvev>

Find the (x,y) solution to the linear system:

$$\begin{cases} 8x - 7y = -6 \\ (-4x + 9y = 14) \end{cases}$$

$$\begin{cases} \cancel{8x} - 7y = -6 \\ -\cancel{8x} + 18y = 28 \end{cases}$$

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$$11y = 22$$

$$y = 2 \rightarrow x = 1 \quad (1, 2)$$

Your art class is selling tickets for an event. Students pay a certain price and everyone else pays a different price. At lunch, \$104 dollars were made selling 18 student tickets and 4 general admission tickets. After school, you sold 12 student tickets and 8 GA tickets making \$96. How much is each ticket?

$$\begin{cases} (18s + 4g = 104) \cdot 2 \\ (12s + 8g = 96) \cdot 3 \end{cases} \Rightarrow \begin{cases} -36s - 8g = -208 \\ +36s + 24g = 288 \end{cases}$$

$$12s + 8(5) = 96$$

$$16g = 80$$

private think time  
listen and compare

$$12s + 40 = 96$$

$$s = \$4.67$$

$$g = \$5$$

Systems of Linear Equations

today

Quadratic Equations

Absolute Value Equations

Function behavior from a calculator

thursday

Inequalities

Geometric Probability



1st  
iteration



2nd  
iteration




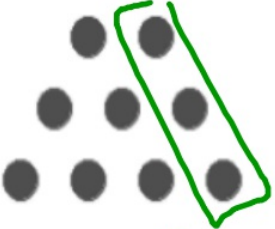
3rd  
iteration

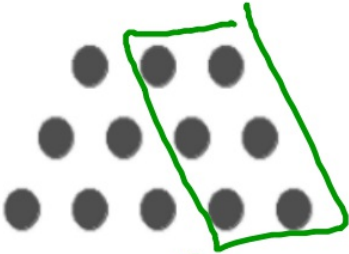
*What are some questions you could ask about this picture?*

#	dots	
1	6	1st iteration
2	9	2nd iteration
3	12	3rd iteration







$(n-1)(3) + 6$   
 $n = \text{step \#}$   
 $3n - 3 + 6$

$\downarrow$

$6 = 3(1) + b$   
 $6 = b$

$\Rightarrow \underline{y = 3x + 3}$

$y = mx + b$      $(1, 6)$

$\uparrow$

$3$

How many dots are in the 43rd iteration?

How many dots are in the  $n$ th iteration?

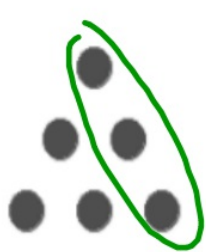
  

$\frac{3}{1} = 3$

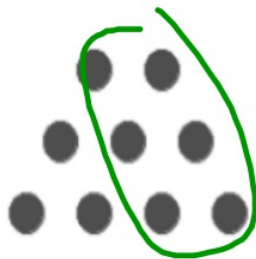
rate

$\rightarrow 3$

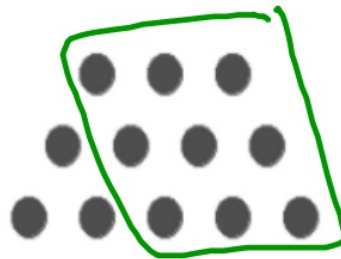




1



2

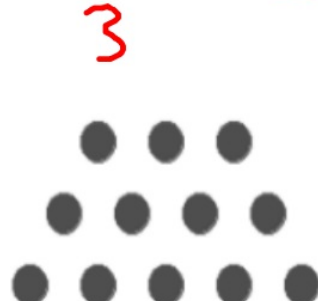
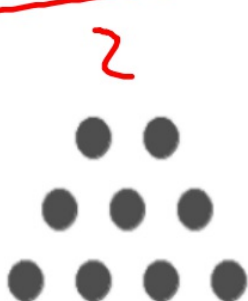
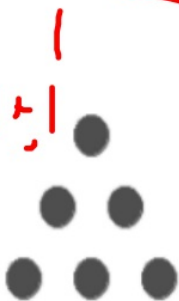


3

$$3(n) + 3$$

$n + n + 1 + n + 1 + 1$

$3n + 3$



Share with your face partner something you've learned today

Systems of Linear Equations

Quadratic Equations

today

Absolute Value Equations

Function behavior from a calculator

thursday

Inequalities

Geometric Probability

Find all values of x such that  $5x^2 - 3x = 26$

$$\frac{-26 \quad -26}{-26 \quad -26}$$

$$5x^2 - 3x - 26 = 0$$

$$(5x - 13)(x + 2) = 0$$

1, 26  
2, 13

check:

$$5x^2 + 10x - 13x - 26 \checkmark$$

$$5x - 13 = 0$$

$$5x = 13$$

$$x = \frac{13}{5}$$

$$x + 2 = 0$$

$$x = -2$$

(did we do  
this one  
yesterday?)

Find the value(s) of  $z$  such that

$$35z^2 = 20z$$

$$\underline{-20z \quad -20z}$$

$$35z^2 - 20z = 0$$

$$z(35z - 20) = 0$$

$$z = 0$$

$$35z - 20 = 0$$

$$35z = 20 \rightarrow$$

$$z = \frac{20}{35}$$

$$z = \frac{4}{7}$$

Find the value(s) of  $y$  such that

$$2y^2 - 7y = 30$$

$$2y^2 - 7y - 30 = 0$$

$$(2y \quad \quad)(y \quad \quad) = 0$$

Do #1-11 odd for Thursday