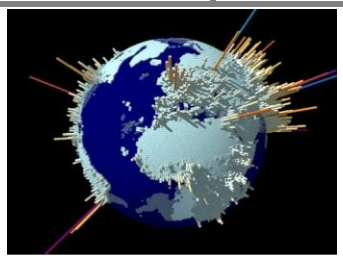
Ready, Set, Go!

Ready



©www.flickr.com/photos/arenamontanus

Topic: Comparing Linear and Exponential Models

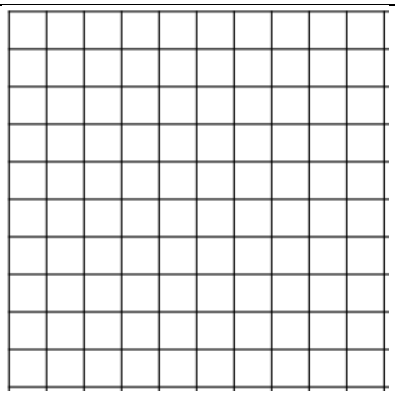
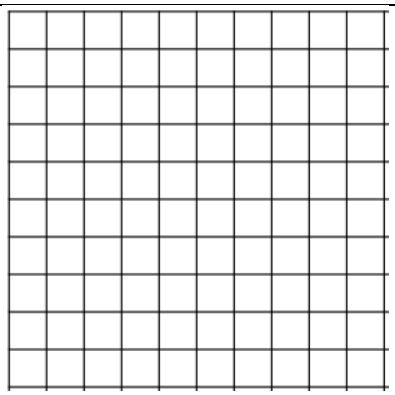
Describe the defining characteristics of each type of function by filling in the cells of each table as completely as possible.

	linear model $y = 4 + 3x$	**exponential model** $y = 4(3^x)$
1. Describe in words the rule for each type of growth.	linear growth	exponential growth
2. Identify which kind of sequence corresponds to each model. Explain any differences.		
3. Make a table of values and discuss how you determine the rate of change.	x | y | | | | | | | | | |	x | y | | | | | | | | | |

© 2012 Mathematics Vision Project| MVP

In partnership with the Utah State Office of Education

Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

4. Graph each equation. Compare the graphs. What is the same? What is different?		
5. Find the y-intercept for each function.		
6. Find the y-intercepts for the functions on the right.	$y = 3x$	$y = 3^x$
7. Discuss everything you notice about the y-intercept for the models in #1 and the models in #6.		

Set

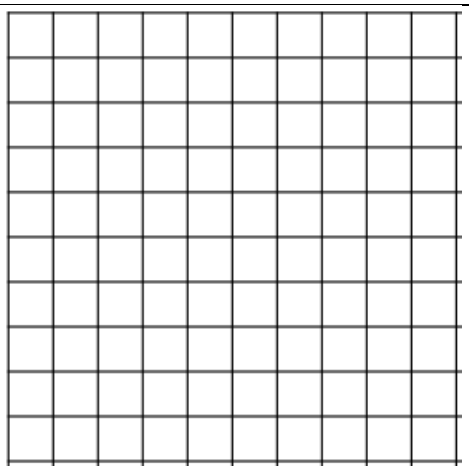
Make a table and graph that represent the model. Predict stage 10. Then write the explicit equation.

7.

Count the triangles.

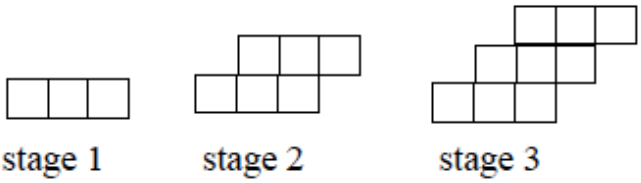
Predict the number at stage 10.	Write the explicit equation.
Graph.	Table

© 2012 Mathematics Vision Project| MVP
In partnership with the Utah State Office of Education
Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

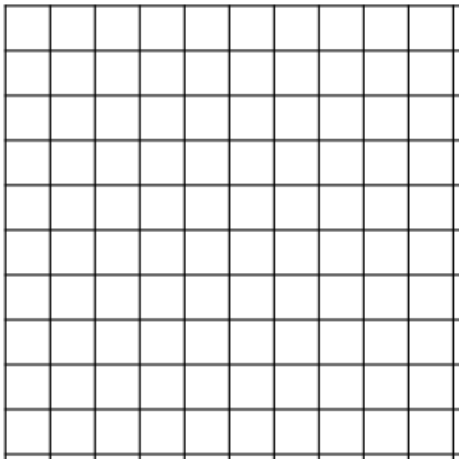


x	y

8. Count the squares in the stair steps.



Graph.



Table

x	y

Predict the number of squares in stage 10

Write the explicit equation.

© 2012 Mathematics Vision Project| MVP
In partnership with the Utah State Office of Education
Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.

Go

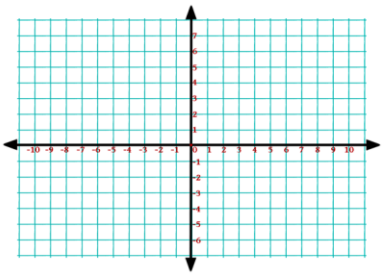
Topic: Solving systems through graphing.

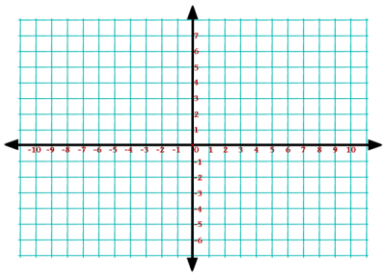
Find the solution of the systems of equations by graphing.

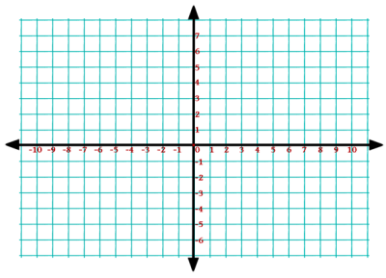
9. $\begin{cases} y = -x \\ y = 3x - 4 \end{cases}$

10. $\begin{cases} 2x + y = -6 \\ y = x \end{cases}$

11. $\begin{cases} y = 2x - 2 \\ x + 3y = 15 \end{cases}$



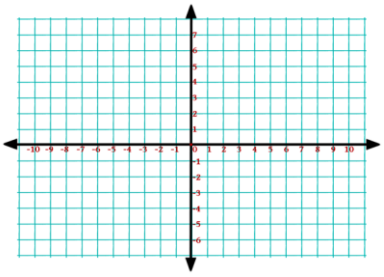


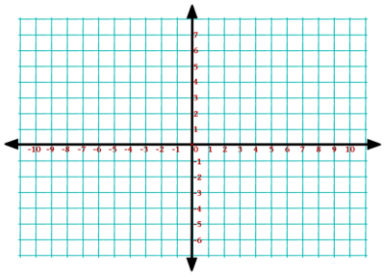


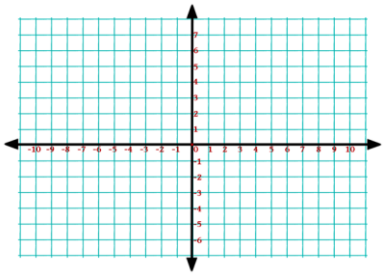
12. $\begin{cases} y + 3 = 6x - 2 \\ y - 2x + 1 = 4(x - 1) \end{cases}$

13. $\begin{cases} y = -(x - 4) \\ y - 2x - 1 = 0 \end{cases}$

14. $\begin{cases} y = 3(x - 2) \\ y + x - 2 = 4(x - 1) \end{cases}$







Need Help? Check out these related videos:

Comparing Linear and exponential functions:

http://www.khanacademy.org/math/algebra/algebra-functions/v/recognizing-linear-functions

http://www.khanacademy.org/math/algebra/ck12-algebra-1/v/identifying-exponential-models

© 2012 Mathematics Vision Project| MVP

In partnership with the Utah State Office of Education

Licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported license.