

Speedy Squares

Connecting cubes at a steady pace, how long will it take to build a line 676 cubes long?

Estimate:

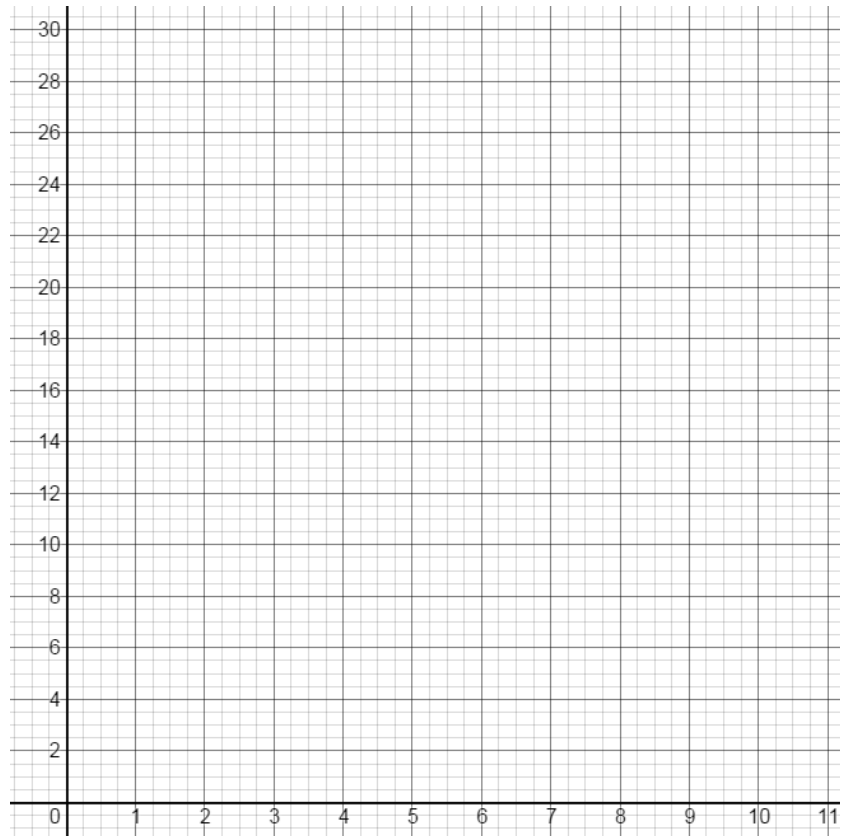
Too low:

Too High:

Just Right:

Collect some data. Build a line of 5, 6, 7, 8, 9 and 10 squares. Time to see how long each one takes.

# of Cubes	Time (s)
5	
6	
7	
8	
9	
10	



What is the independent variable?

What is the dependent variable?

Create a scatter plot of your data.

Does the data look linear or quadratic? Explain.

Determine the equation that models your data.

Use your equation to determine how long it would take to put together 676 cubes. Show your work.

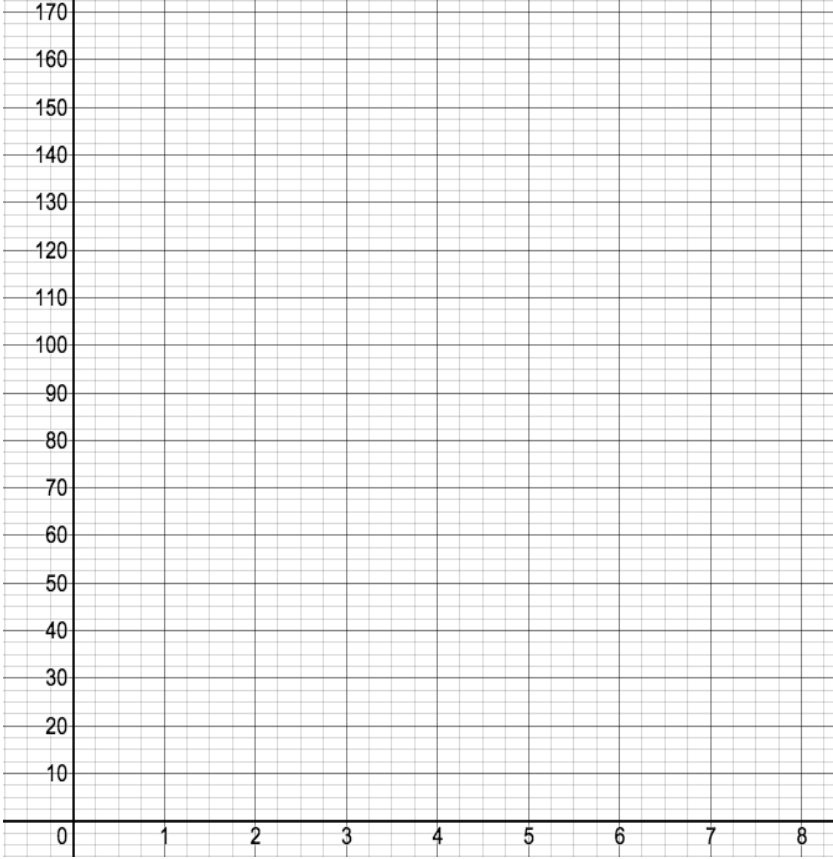
How long would it take you to build a 26 by 26 square out of linking cubes?

Estimate:

Too low: Too High: Just Right:

Build squares out of cubes and keep track how long it takes.

Side Length	Time (s)



What is the independent variable?

What is the dependent variable?

Create a scatter plot of your data.

Does the data look linear or quadratic? Explain.

Determine the equation that models your data.

Use your equation to determine how long it would take to build a 26 by 26 square. Show your work.

How does your answer compare to the time to assemble 676 squares on page 1? Is this what you would have expected? Explain.

Next start by building a rectangle with a width of 2 cubes and a length of 1 cube. Consider this step 1. For each step double the length of the previous rectangle.

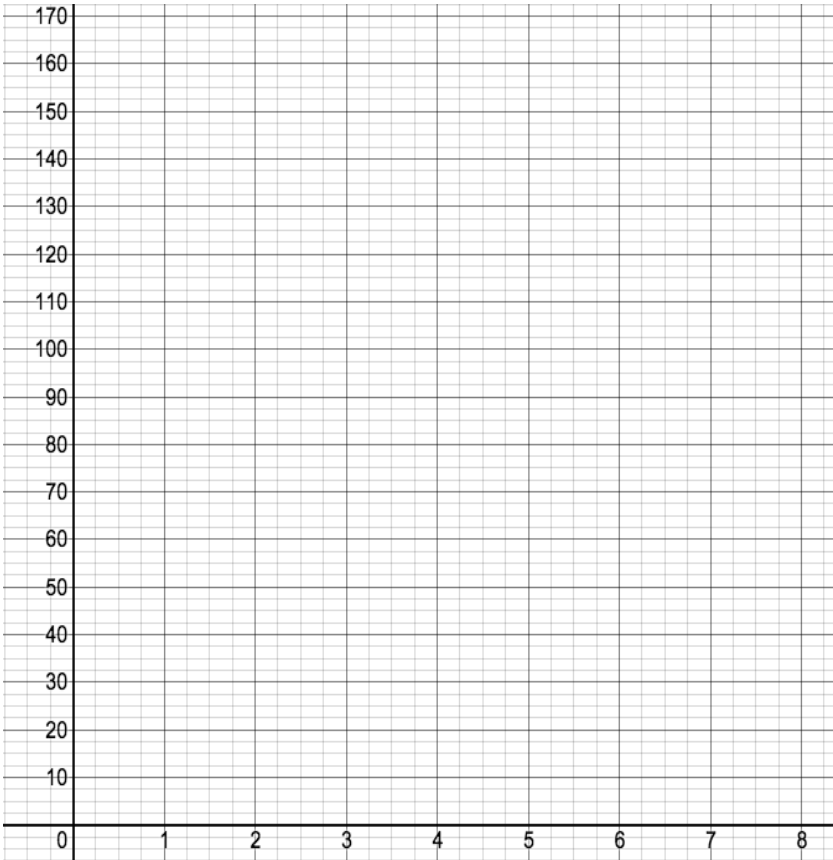
Step #	Time (s)
1	
2	
3	
4	
5	

What is the independent variable?

What is the dependent variable?

Create a scatter plot of your data.

Does the data look linear or quadratic or neither? How can you tell?



Determine the equation that models your data.

Use your equation to determine how long it would take to build step 43.