

# Taking a Mathematical Journey

Developing a Mathematical Toolkit, Usha Kotelawala

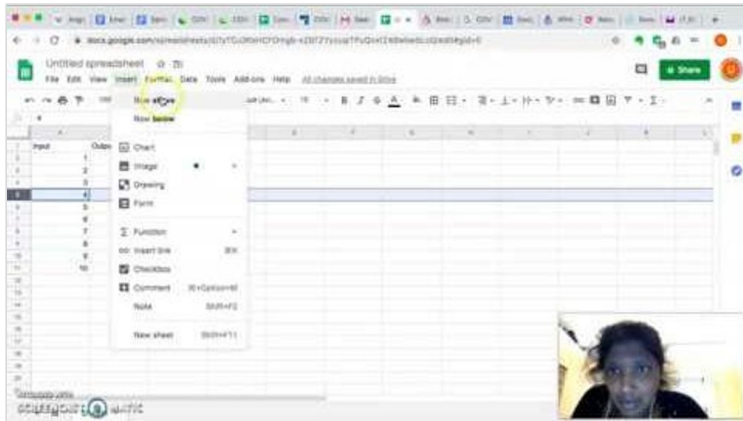
USHA APR 15, 2020 08:31PM

## Exploring Modeling I

### Links

Getting started with Google Sheets

<https://youtu.be/ELfPokQ4nDU>



#### FillDownFormulasInsteringBasics

by Usha Kotelawala

YOUTUBE

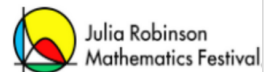
### StarterSpreadsheet

#### StarterSpreadSheet

Excel spreadsheet

PADLET DRIVE

## Modeling the Coronavirus



#### VirusApr16

Powerpoint presentation

PADLET DRIVE

## Tools

### Covid19 Fact Sheet

beginning to have symptoms of the disease. Most estimates of the incubation period for COVID-19 range from 1-14 days, most commonly around **five days**.

- 80% of those infected recover without needing special treatment.
- Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness.
- People with fever, cough and difficulty breathing should seek medical attention.
- Using available preliminary data, the median time from onset to clinical recovery for mild cases is approximately 2 weeks and is 3-6 weeks for patients with severe or critical disease.
- The number of virus patients admitted to hospitals in New York City dropped 17 percent from Saturday to Sunday, Mr. de Blasio said early Monday.
- The mayor said that 383 people had been admitted on Sunday, down from 463 the day before.
- At his daily briefing in Albany on Sunday, Mr. Cuomo pointed to [a report last week](#) by Kaiser Health News that examined how much of the \$30 billion in payments would go to each state. The report estimated that New York would get about \$12,000 per coronavirus case and New Jersey would get about \$18,000, while West Virginia would receive about \$471,000 per case and Minnesota would get about \$380,000.
- The New York City Department of Education reported on Monday that between March 16 and April 10, 50 school staffers passed away due to complications caused by the novel coronavirus.
- 752 lives were lost on Tuesday (April 7<sup>th</sup>)...(in New York State)... 671 more deaths from coronavirus were reported on Easter Sunday, causing the death toll

### Covid19 Fact Sheet 20200415

Word document

PADLET DRIVE

Dates	NYC deaths	NYC Hospitalizations	NYC Cases
1-Apr	366	1437	4723
2-Apr	398	1633	5460
3-Apr	420	1632	4999
4-Apr	421	1356	3615
5-Apr	473	1337	3433
6-Apr	463	1612	5957
7-Apr	487	1373	5424
8-Apr	411	1239	4639
9-Apr	358	855	3405
10-Apr	316	644	2710

### CovidModelingNYCDataSampleExcel

Excel spreadsheet

PADLET DRIVE

## a little data

A small sample from NYC

### COVID19Modeling

Sheet1 NYC deaths, NYC

Hospitalizations, NYC Cases

4/1,366,1437,4723 4/2,398,1633,5460

4/3,420,1632,4999 4/4,421,1356,3615

4/5,473,1337,3433 4/6,463,1612,5957

4/7,487,1373,5424 4/8,411,1239,4639 4/9,358,855,3405

4/10,316,644,2710

GOOGLE DOCS

NYC Deaths	NYC Hospitalizations	NYC Cases
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## a little data on Excel

Same as above

## Sharing

## Zoom Steps

## AGENDA and steps when lost

Agenda and Breakout room tasks

Create ten inputs using the fill down tool  
Enter the formula for the output for your first input.  
Fill down the formula for your table

Insert a row in the middle of your table.  
Write in a random input.  
In the output column, fill in the formula from the output cell above

Now fiddle around and try your own function.  
See how fill down work when you type in April.

2:20  
Share and record 2-3 quantitative questions you'd be interested in exploring regarding the coronavirus. (Writing in the chat may not get saved, so please just record you questions with old fashioned pencil and paper, or on a doc)

It should be a question that is NOT just answerable by reading the web. Our goal today is to build simple models to answer the questions.

### 2<sup>nd</sup> Round of Breakout rooms. (Note, I will be circulating)

- Volunteer or nominate a Group facilitator.
  - Volunteer or nominate a record keeper.
- I. What is your question?
  - II. What are your simplifying assumptions to get started?
  - III. Begin building your model
  - IV. How can you share your 1<sup>st</sup> model?
  - V. If time permits, how can you revise your model?

Note: there is some NYC data on the padlet: [padlet.com/mathtrains/Mathtrainsny](https://padlet.com/mathtrains/Mathtrainsny)

### agendaCamiWebinarModelingI

Word document

PADLET DRIVE

## Things you can do...

Mute and unmute

Annotate

