**Exponents Explained**

At the start of the COVID-19 pandemic it was estimated that every infected person would infect 4 others. The incubation period was often around 5-6 days but could take up to 14. Assuming an incubation period of one week (7 days), how long would it take for 3.5 million people (the population of CT) to be infected? [[1]](#footnote-1)

|  |  |  |
| --- | --- | --- |
| Week | Number of new cases each week | Total number infected |
| 1 | 1 | 1 |
| 2 | 4 | 5 |
| 3 | 16 | 21 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |
| 13 |  |  |
| 14 |  |  |
| 15 |  |  |
| 16 |  |  |

Complete the table to answer the opening question, “Assuming an incubation period of one week, how long would it take for 3.5 million people to be infected?

Graph the table above. When the media and public officials talked of “flattening the curve”, what did that statement refer to?

What was your response to COVID-19 and your attitude toward local and state-wide mandates on shutdowns and restrictions on activities? Would an understanding of exponential growth have changed your actions?

Below are global, national and state confirmed cases as of June 4, 2021.

**GLOBAL CASES** WORLD-WIDE

Chart

Description automatically generated Chart, line chart, histogram

Description automatically generated

**CONNECTICUT CASES**

Chart, histogram

Description automatically generated

For a video discussion of COVID-19 and exponential spread see:

[**https://www.youtube.com/watch?v=fgBla7RepXU**](https://www.youtube.com/watch?v=fgBla7RepXU)

<https://www.youtube.com/watch?v=k6nLfCbAzgo>

<https://www.youtube.com/watch?v=Kas0tIxDvrg>

1. Note: This is the simplest model for infection rate. Many scientists, immunologists and mathematicians worked to define and refine models to make accurate predictions for infection rates as more data on the factors associated to contagion spread became available. [↑](#footnote-ref-1)