

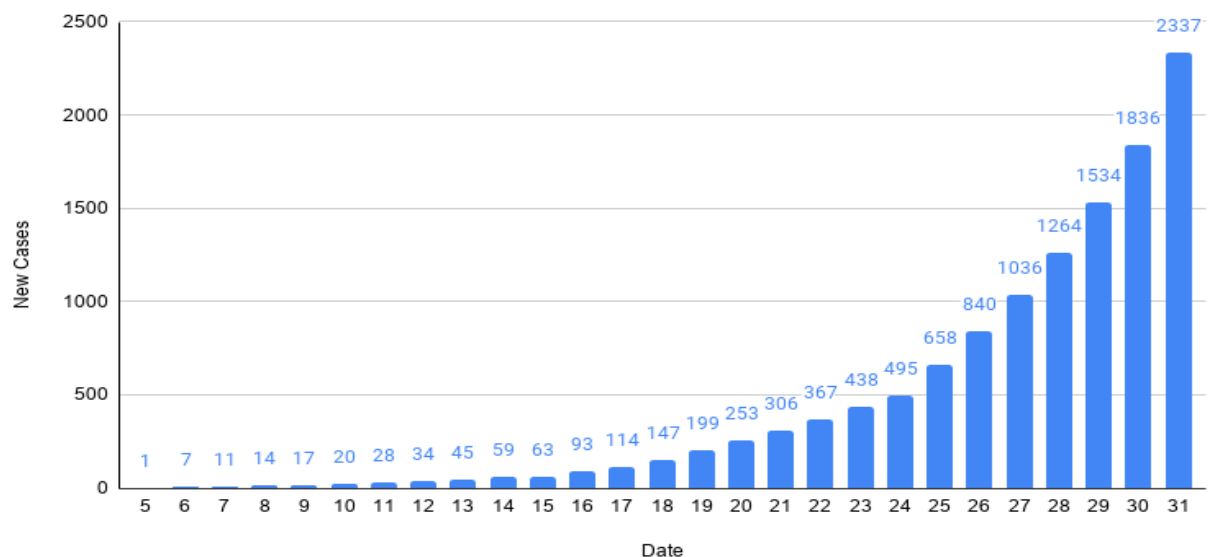
# **Misleading Graphs of COVID - 19**

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This graph shows the growth of COVID-19 of Russia from March 5 to March 31. At first look, we can see that the cases have been increased rapidly from 5th to 26th and after 26th the growth seems like happened to slow down and come closer to the top. Until March 26, the height of the bars corresponds to the number of cases. For instance, the bar for march 16 which has 93 cases is twice high as the bar for 13 which has 45 cases. So the visual height seems equal to the numerical height in this period. But after the 26th of March, the heights of bars do not correspond to its numerical values. We can see that the cases for the 28th are approximately thrice as the cases for 23rd. But the bars do not visualize that much of difference. Hence people get the wrong idea that the growth has slowed down. But the truth is that the growth does not correspond with the graph.

New Covid -19 cases in Russia from 5th - 31st March

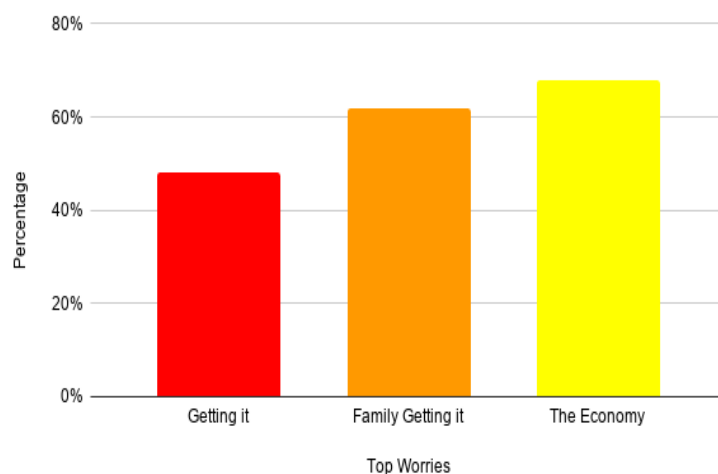


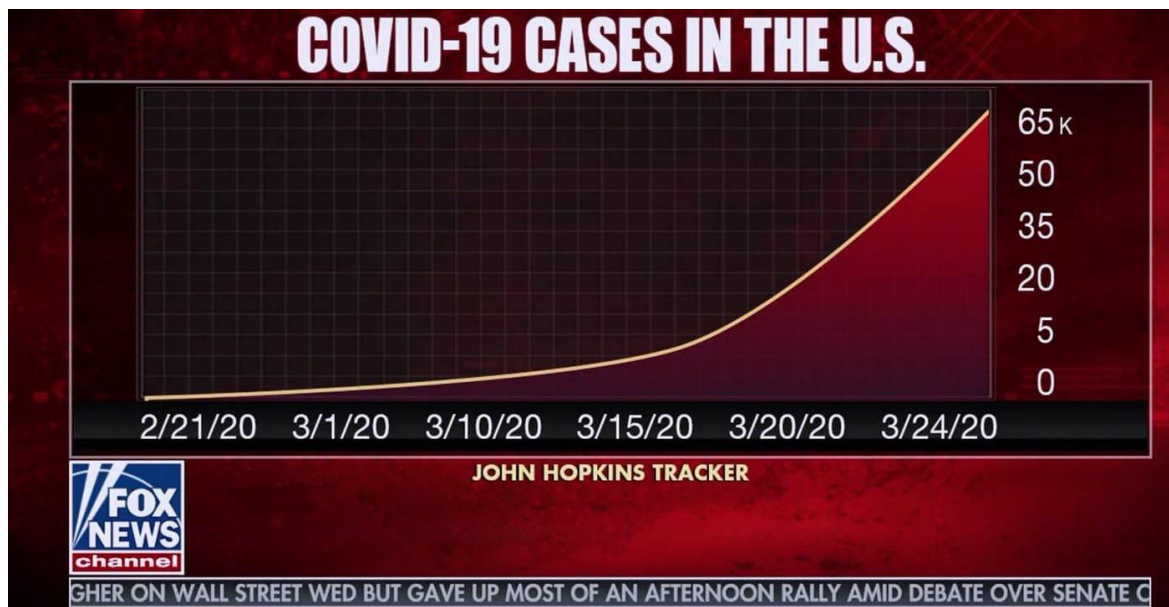
This is the correct graph that describes the above data. Here the height of the bars corresponds to the numerical values so that people will not get confused by seen this graph. The x-and y-axis labels are also included in the bar graph.



This pie chart was displayed on a new channel. The idea they are trying to visualize is that the COVID -19 worries in public. They have done a survey with multiple answers and the top three priorities have mentioned here. However, here the total of every slice adds up to more than 100% which is totally impossible. They have used the wrong type of chart to visualize the survey outcomes. They could use a bar chart to visualize this survey outcome since pie charts are used to compare the parts of a whole, not the difference between groups. Below is the correct visualization.

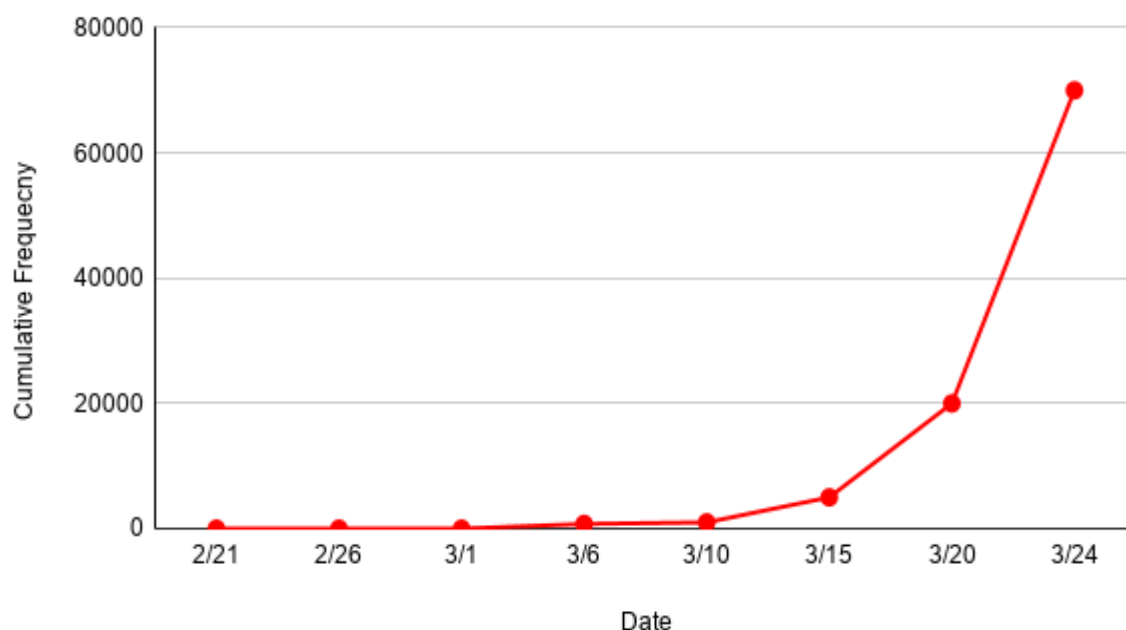
Percentage vs Top Worries





Here the graph from USA Fox news shows the cumulative frequency of the COVID - 19 cases of the USA for a given time period. But we can see that the both x-axis and y-axis have been manipulated. Considering the x-axis the number of days between each important date is not constant. So, the x-axis should have the same gap in the dates. Coming to the y-axis, the gaps are also not constant. It varies from 0 to 5000 and 5000 to 20000 and so on which has a huge gap difference. So, we should introduce similar gaps to the both x and y-axis in order to correct the graph.

### Cumulative Frequency vs Date



After correcting the graph, we can clearly see that how fast the COVID -19 spread during past few days without any confusion. And also the x and y axes are named accordingly.