CORONA VIRUS

I) You are going to watch a video on corona virus. Which of the four questions is the most interesting for you? Why?

 1) What is exponential growth?   2) Can we stop COVID-19?

 3) How many people will die?   4) When will corona virus stop spreading?

II) (00.00-01.10) The video says that viruses like the one that causes COVID-19 are textbook example of exponential growth. Can you think of any other real life examples of it?

III) (01.10-01.40) This is a formula that shows three factors that influence the number of new cases of COVID-19. What do you think they are? Watch and see if you were right.

$$\text{Number of new cases} = E * p * Nd$$

  E -

  p -

  Nd -

IV) (01.40-03.00) The video says that 64 cases of COVID-19 in Australia are not better news than 6593 cases in Korea. Why?

V) (03.00-05.30) Exponential growth can't go on forever. How do we know that it is over? Draw a graph and explain what is inflection point.

VI) (05.30-06.10) Growth factor allows us to understand where we are in the process of disease spreading. Calculate the growth factor on these numbers.

Date	No of cases	Changes	GROWTH FACTOR
March 3, 2020	12000		
March 4, 2020	14000		
March 5, 2020	18000		
March 6, 2020	21000		

What has been the average growth factor for corona virus in the exponential phase?

VII) (06.10-06.48) If we hit the inflection point at 500.000 cases of corona virus around the world. What will be the total number of infections?

VIII) (06.48-07.40) Does the fact that people are clustered in communities (countries, continents, etc.) influence the way the virus spreads?

IX) (07.40-08.56) Saturating the whole population (getting everyone infected) is not the only way to stop corona virus from spreading. What are the other ways?

VOCABULARY

average

case

cluster

constant

exponential growth

growth factor

inflection point

logistic curve

proability

saturation

sufficient