

Euler's Number and Its Properties

Alili, Nurlana (School: Secondary School #17)

The project differs not only from the scientific side, but also from the social broadcasting point of view. The number e is widely used in mathematics. I have researched all possible contexts of it separately and reflected them all in a scientific article written in easy language. Applications of the number e in statistics, Gamma function, differential equations, Logistic growth and probability are almost never found in the school curriculum. My scientific research studies the history of this number, draws conclusions, uses a logistic model, and shows the validity of Euler's number based on a real model. I derived a method to ensure that final amount compounded infinitely many times will not approach infinity but one. Also, knowing full capacity of ecosystem, I examined the ways to most accurately predict total population, half-life of plants, natural resources excision, etc. I have posted interactive videos made by myself on social networks and educational pages so that this material can be understood by students with even intermediate math skills and even adults. These types of video lessons are new for our youth because I am not challenging students to just memorize formulas. I create videos full of interactivity and interest, relating mathematical problems and contexts to real-life problems.

Awards Won:

