Uncle Petros and Goldbach's Conjecture

Youth and Mathematics

A key plot point to Goldbach's Conjecture is Uncle Petros' deceit in giving his unsuspecting nephew the Sisyphean-task of solving Goldbach's theorem in order to prove his worth as a mathematician. The protagonist is infuriated to realize, upon the start of his junior year of college, that his Uncle had essentially set him up for failure by leading him to attempt to solve the very problem he himself couldn't solve during his career as a mathematician.

Given Petros' self-defined futile effort in his inquiry to solving Goldbach's Conjecture, which occurred in his 30's, are the readers to assume Petros' task was to save his nephew's youth from an unwinnable quest for perfection in mathematics? It is pointed out in the text that rarely does a mathematician, past the age of 35, do great work in mathematics. With this in mind, how does the idea of youth plan into Petros' experience and that of the protagonist?

Obsession in Mathematics

Several texts we've read, for example *Logicomix* also by the author Apostolos Doxiadis, deal with the theme of obsession of mathematicians, particularly those pursuing the answer to fundamental problems of mathematics. Petros notes that there is no "silver medal" for discovery of key theorems and even expresses latent joy over the death of a fellow student on the notion that another great mathematical mind that potentially could solve the answer to Goldbach's conjecture first is gone.

What motivations/features of the life of mathematicians can we attribute to this obsessiveness? On the one hand, Petros is portrayed as having mostly a singular focus on numbers from the beginning of his life but as he starts his studies at Cambridge is more specifically motivated to find the answer to a previously unsolvable problem in Mathematics. With this knowledge of the thrust of the text's narrative, does Petros' ultimate obsession reflect more a general nature of mathematical thinkers or of simply driven

Unprovability/Absurdity of theorems

The role of Godel's Incompleteness theorem turns out to be a crucial point in Petros' eventual abandonment of his ambitions towards solving Goldbach's Conjecture. The revelation that there are in fact mathematical problems for which no theory can be found shakes Petros' previously stern conviction that the answer was out there and that he would find it

Question I'd like Prof. Kozek to ask to the class- Does Uncle Petros present a pessimistic view of modern mathematics?

Mathematical Characters/References

-Appearing in the book

-Kurt Godel
-Alan Turing

Referenced

-Christian Goldbach
-Bertrand Russell
-Archimedes

Important Theorems in Book

-Goldbach's Conjecture
-Godel's Incompleteness Theorem