## D. School 16

## Chapter 16 - Andrew Wiles

The man was thin, wearing a gray-blue shirt, and his slender neck made his normal head look a bit big, and the hairline on the top of the head could not hold their place, only a small group in the center The hair remained stubbornly clinging to its place, and it looked as if Moses had left her head from the front.

It's really bad clothes taste and hairstyle. I'm afraid most people will spit like this when they see him for the first time, but when you come into contact with his eyes under the gold glasses, you will withdraw the above evaluation and turn to him. The light of wisdom shed in the midst of falling.

Lv Qiu built up the whole clothes and greeted respectfully in two steps forward, "Professor Gals! Hello, Professor Wiles! Hope you are not disturbed!"

"No! Lu, Andrew came to see you specially!", Professor Gauls led Lu Qiujian to the sofa and sat down, called his assistant with a snap, "Lu, do you drink tea or coffee?"

"Tea, thank you!", Lu Qiujian generously sat on the sofa, looking up at the supreme sacred coat of mathematics now, "Professor Wiles, can I help you?"

Professor Andrew Wiles was revered by mathematicians all over the world because he solved Fermat 's theorem seven years ago, which has puzzled the mathematics for more than three hundred years.

In 1637, the Frenchman Pierre de Ferma, known as the king of amateur mathematicians, wrote in his notebook: It is impossible to write a cubic number as the sum of two cubic numbers; or a power of four It is written as the sum of two 4th powers; or, in general, it is impossible to write a power higher than 2 times as the sum of two same powers.

This genius who loves mischief, and wrote an additional comment at the back: I have a very wonderful proof of this proposition. The blank here is too small to write.

After Fermat's death, his son realized that the sketchy self may have its value, and it took five years to print it. These clues discovered by fluke became the misfortune of all mathematicians. A theorem that high school students can understand has become the largest unsolved case in mathematics, and

has tortured the smartest minds in the world for 358 years. Generations of math geniuses have succeeded and challenged this conjecture.

Fermat's theorem itself from the proposal to the proof of the process is an out-and-out thriller novel. The process of seeking proof of Fermat's theorem touched the most talented person on the planet, full of desperate resistance, unexpected turning points, patient patience, and splendid spirituality.

Euler, one of the greatest mathematicians of the 18th century, found that in a special edition of "Arithmetic" elsewhere, Fermat described a proof of the fourth power in a subtle way. Euler perfects this vague proof in detail and proves that there is no solution to the third power. But after his breakthrough, there are still numerous powers to prove.

When Sophie Germain, Legendre, Dirichlet, Gabriel-Lamey and other Frenchmen made another breakthrough, nearly 200 years have passed since Fermat wrote that theorem, and they only Proved 5th power and 7th power.

In fact, Lame has already announced that he is about to prove Fermat's theorem, and another mathematician Cauchy also said that he would publish a complete proof. However, a letter shattered their confidence: German mathematician Kummer saw that the two Frenchmen were heading towards the same logical dead end.

While shaming the two mathematicians, Kummer also proved that the complete proof of Fermat's theorem was impossible by the mathematical method at that time. This is a glorious page of mathematical logic and a huge blow to a whole generation of mathematicians.

In the 20th century, mathematics began to turn to various research fields and made extraordinary progress. In 1908, the German industrialist Wolff Skel set up a bonus for those who might overcome Fermat 's theorem in the future, but an unknown mathematician seemed to ruin everyone 's hope: because this problem is so difficult, Gödel, who proposed the incompleteness theorem, even suspected that this is a problem that cannot be solved in the existing arithmetic axiom system.

Despite Gödel 's fatal warning and despite three centuries of vigorous failures, some mathematicians continue to devote themselves to this problem at the risk of wasting their lives. With the advent of computers after World War II, a lot of computing is no longer a problem. With the help of computers, mathematicians proved Fermat's theorem for values within 500, then within 1,000, and then within 10,000. By the 1980s, this range had increased to 25,000, and then to 4 million.

However, this success is only superficial. Even if the range is increased, it can never be proved to infinity, and it cannot be claimed to prove the entire theorem. Solving the case seems far away.

In 1963, Andrew Wiles, who was only ten years old, met Fermat's theorem in a book called "The Big Problem" and knew that he would never give it up and must solve it. In the 1970s, he was studying elliptic equations at Cambridge University, and it seemed to have nothing to do with Fermat 's theorem.

At this time, two Japanese mathematicians have proposed the Gushan-Shimura conjecture to unify the elliptic equations and module forms that Wiles is studying. It seems to have nothing to do with Fermat's theorem.

In the 1980s, several mathematicians combined the most important problems of the 17th century with the most meaningful problems of the 20th century, and found the key to prove Fermat 's theorem: as long as they can prove the Gushan-Shimura conjecture, they automatically prove the fee Martha's theorem.

Dawn is ahead, but no one has confidence in the arrival of dawn. Gushan-Shimura conjecture has been studied for 30 years and all ended in failure. Now it is linked to Fermat 's theorem and there is even no last hope. Because, anything that might lead to the resolution of Fermat 's Theorem is by definition impossible at all—this is almost conclusive.

Even the key person who discovered the key, Ken Ribert, was pessimistic. "I did n't really bother trying to prove it, or even thought of trying it." Most other mathematicians, including Andrew Wiles Instructor John Coates believes that this proof will be futile, "I must admit that I think it may not be possible to see it proven in my lifetime."

Almost everyone has given up, except Andrew Wiles.

Wiles gave up all work not directly related to the proof of Fermat's theorem, and in a completely confidential state, launched a lonely challenge to this mystery that has puzzled the world's wise men for more than three hundred years. Fermat researcher.

After seven years of dedicated efforts, Andrew Wiles, who was painstakingly and solitary, completed the proof of Gushan-Shimura conjecture. On June 23, 1993, at the Newton Institute in Cambridge, he began the most important lecture in mathematics of this century. Everyone who contributed to the proof of Fermat 's theorem was actually in the room at the scene, 200 people Mathematicians were stunned. What they saw was that for the first time in more than three hundred years, Fermat 's challenge was conquered.

Wiles wrote the conclusion of Fermat's Theorem, then turned to the audience and said peacefully, "I think I will end here." A long burst of applause broke out at the meeting. The next day, the mathematician occupied the first Front page headlines of newspapers. "People" magazine listed him with Princess Diana and Oprah as one of the "25 most attractive people of the year", and a fashion company asked the gentle gentleman to advertise their new collection of men's clothing.

But things did not end here, the next development is still like a thriller novel, the case is solved, but the criminal is not easy to catch. Wiles submitted a 200-page manuscript to the "Mathematical Invention" magazine and began a complex review process. This is a very large argument, constructed by hundreds of mathematical calculations intricately structured by thousands of logical links. As long as there is a calculated error or a link is not well connected, the entire proof may lose its value.

Problems to be solved will prove its value by counterattack. During the harsh review process, the reviewers encountered a problem that seemed to be a minor problem. The essence of this problem is that Wyeth cannot guarantee that a method will work as originally envisaged. He must strengthen his proof.

The longer the time, the longer the problem can't be solved, UU Reading www.uukanshu. com the world began to doubt Wiles. After 14 months have passed, he is ready to publicly acknowledge the failure and issue a statement that proves to be defective. At the last moment when the mountains and rivers were exhausted, on a Monday morning on September 19, 1995, he decided to review it one last time, trying to determine exactly why the method did not work.

A sudden burst of inspiration brought his suffering to an end: although that method did not fully work, but only needed to make another theory he once gave up work, the correct answer could appear in the ruins-two differences The combination of insufficient methods to solve problems can complement each other perfectly.

For 20 minutes, Wiles stared at the result and could n't believe it. Then, there was a huge sense of loss that there was nothing else to do.

One hundred years ago, the Wolfskell Prize designed specifically for Fermat 's Theorem set a deadline of September 13, 2007. Like all thrillers, the bomb was removed at the last moment of the explosion.

This story is exactly the same as the story of Chen Jingrun and Goldbach's conjecture that the Chinese are familiar with. Unfortunately, Chen Jingrun only advanced the proof of Goldbach's

conjecture by a big step without completing the final proof. Andrew Wiles Completely solve Fermat's theorem.

And now the wise man who took off the brilliant pearl in the crown of mathematics is looking at Lu Qiujian, "Lu, I want to talk to you about your proof!"