

## RESEARCH ON THE APPLICATION OF MATHEMATICAL THINKING METHODS IN HIGH SCHOOL MATHEMATICS TEACHING

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### ABSTRACT

China's college entrance examination has established an index system of "one core", "four layers" and "four wings"<sup>[1]</sup>. In the new college entrance examination reform, teachers should guide students to explore, explore new methods, actively solve difficulties, and encourage students to solve the limitations of logical thinking, fixed skills and inertial thinking, and have the courage to challenge and innovate independently. Demonstrate the characteristics of comprehensive openness to the outside world in various forms, and then create outstanding talents with strong scalability and continuous learning ability to promote social development. In mathematics teaching, the most important thing for students at this stage is to lay a solid foundation for thinking training, be proficient in using formulas to solve problems, and master the ability to answer questions in mathematics class. This paper analyzes the application of thinking methods such as observation and practice, analogy and conjecture, specialization and generalization, transformation and classification, abstraction and generalization, etc., in solving mathematics problems in ordinary middle schools, which can provide an effective reference for teachers' teaching.

**Keywords:** High school mathematics; mathematical thinking methods; Mathematics teaching.