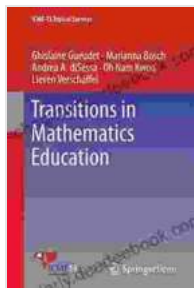


Transitions in Mathematics Education: ICME-13 Topical Surveys

The International Commission on Mathematical Instruction (ICMI) is a leading international organization dedicated to advancing mathematics education at all levels.



Transitions in Mathematics Education (ICME-13 Topical Surveys) by Bob McCullough

★★★★☆ 4.2 out of 5

Language : English
File size : 269 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Word Wise : Enabled
Print length : 44 pages



In 2016, ICMI organized the 13th International Congress on Mathematical Education (ICME-13), which brought together over 3,000 participants from 100 countries.

One of the key outcomes of ICME-13 was the publication of a series of Topical Surveys, which provide comprehensive overviews of major research areas in mathematics education.

These surveys offer valuable insights into the evolving nature of mathematics education, highlighting key trends, challenges, and

opportunities.

Major Transitions in Mathematics Education

The ICME-13 Topical Surveys identified a number of major transitions in mathematics education that are shaping the field.

These transitions include:

- A shift from a focus on content knowledge to a focus on mathematical practices
- A move towards more student-centered and inquiry-based learning
- An increased emphasis on the use of technology in mathematics education
- A growing awareness of the importance of equity, diversity, and inclusion in mathematics education
- A growing commitment to sustainability in mathematics education

Shift from Content Knowledge to Mathematical Practices

Traditionally, mathematics education has focused on teaching students specific content knowledge, such as number facts, algebraic procedures, and geometric theorems.

However, in recent years, there has been a growing shift towards a focus on mathematical practices, such as problem solving, reasoning, and communication.

This shift has been driven by a number of factors, including:

- The recognition that content knowledge is not sufficient for success in mathematics
- The belief that mathematical practices are essential for lifelong learning
- The desire to make mathematics more engaging and meaningful for students

The shift towards a focus on mathematical practices has had a significant impact on mathematics education.

For example, it has led to a greater emphasis on problem solving in the classroom, as well as a focus on developing students' reasoning and communication skills.

Move Towards More Student-Centered and Inquiry-Based Learning

Another major transition in mathematics education has been the move towards more student-centered and inquiry-based learning.

In traditional mathematics classrooms, the teacher is typically the center of attention, and students are expected to passively receive knowledge.

However, in student-centered classrooms, the focus is on the student, and students are encouraged to actively construct their own learning.

Inquiry-based learning is a type of student-centered learning that emphasizes the importance of students asking questions, exploring problems, and making discoveries.

This approach to learning has been shown to be effective in improving student engagement and understanding.

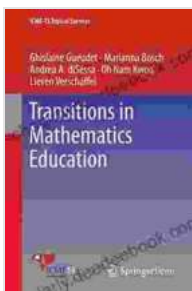
Increased Emphasis on the Use of Technology in Mathematics Education

The use of technology in mathematics education has increased dramatically in recent years.

Technology can be used to support a variety of learning activities, such as:

- Solving problems
- Exploring mathematical concepts
- Communicating mathematical ideas
- Creating mathematical models

The use of technology in mathematics education has the potential to improve student learning.



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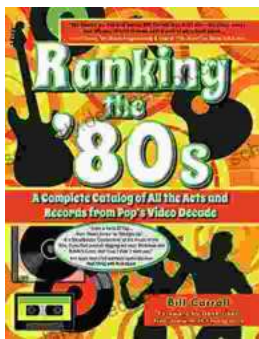
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