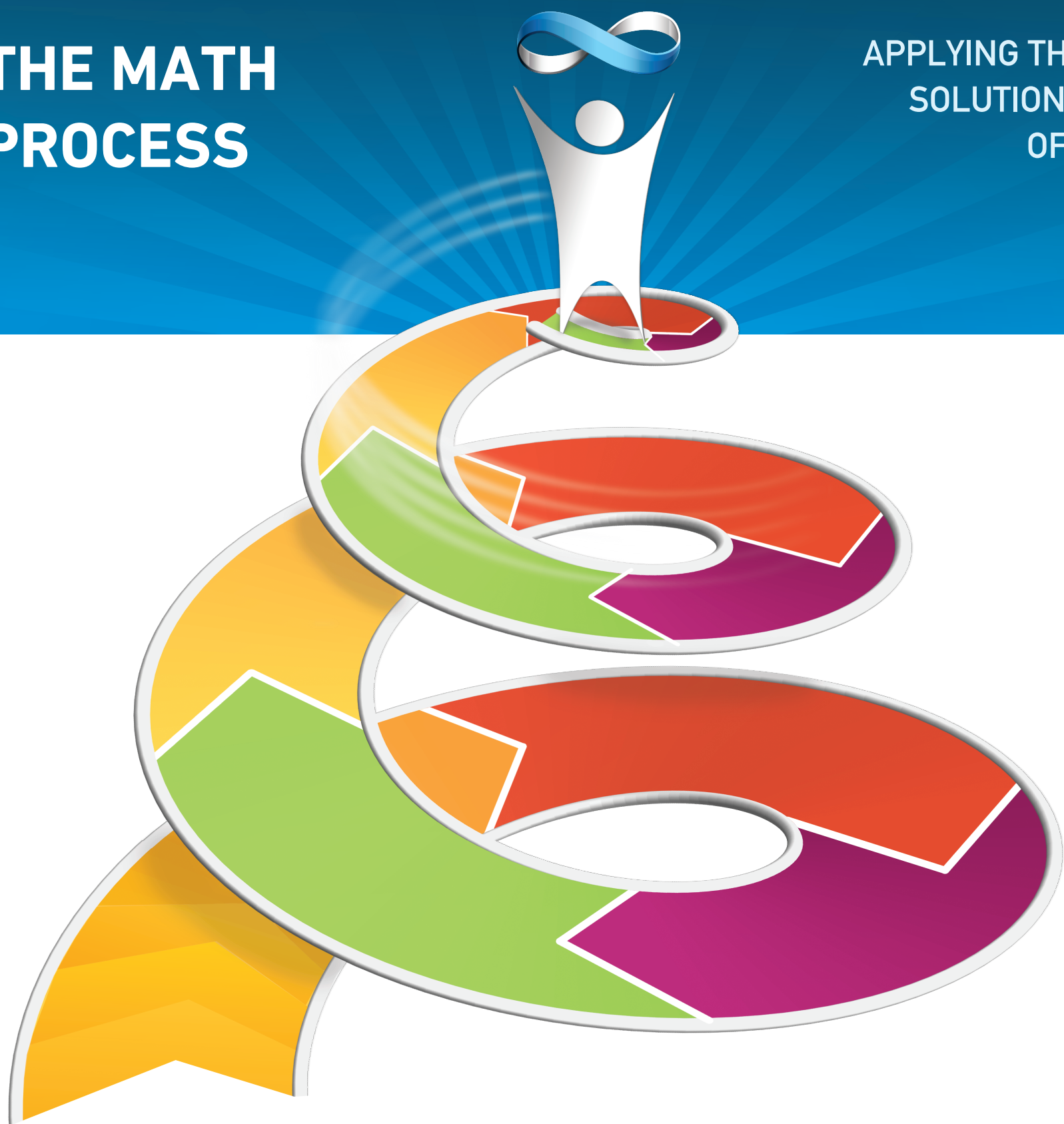


THE MATH PROCESS

APPLYING THE CBM SOLUTION HELIX OF MATH



QUESTIONS

Think through the scope and details of the problem; define manageable questions to tackle.

DEFINE
QUESTIONS

MATH MODELS

Prepare the questions as math models ready for computing the answer. Select from standard techniques or formulate algorithms.

TRANSLATE
TO MATH

MATH ANSWERS

Transform the math models into math answers with the power of computers, or by hand-calculating. Identify and resolve operational issues during the computation.

COMPUTE
ANSWERS

NEW KNOWLEDGE

Did the math answers solve the original problem? Fix mistakes or refine by taking another turn around the Solution Helix.

INTERPRET
RESULT

Why Use Math?

Because it's the most powerful way to get answers to a wide range of real-world questions. Several factors contribute to math's power. One is its ability to describe a large number of apparently different situations in precise and standardized ways. Another is because these descriptions come with highly effective methods for working out, or "computing," answers. Math may look cryptic but it's by this "abstraction" from the problem at hand that the same methods can be reused and refined on so many different problems. Math also scales well. Whizz around the CBM Solution Helix in a few seconds for everyday problems like "How fast do I need to go?", or apply it over years at the cutting edge of research to solve problems like "How can I make a car go 1000 mph?"

What Is Computation?

Clearly defined procedures backed up by proven logic for transforming math questions into math answers. For hundreds of years, computation was limited by humans' ability to perform it. Now computers have mechanized computation beyond previous imagination, scaling up to billions of calculations per second, powering math into transforming our societies.

Computer-Based Math (CBM)...

...is building a completely new math curriculum with computer-based computation at its heart, while campaigning at all levels to redefine math education away from historical hand-calculating techniques and toward real-life problem-solving situations that drive high-concept math understanding and experience.

Go interactive with the CBM Solution Helix or get this poster at: computerbasedmath.org/helix



computerbasedmath.org