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Mathematics Rocks!

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Mathematics Rocks!

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Culture and background inevitably shape mathematical thought. Our third summer issue examines this theme, from the rock art of early peoples coming to grips with number and form to how modern mathematics can be made both more engaging and less frightening to the math phobic among us.

In the feature article of this issue, Guershon Harel introduces us to a framework for teaching mathematics derived from three principles: duality, necessity, and repeated reasoning (DNR). He centers his discussion of the main tenets of DNR on a specific high school curriculum on complex numbers.

Kori Maxwell and Iman Chahine take us to Morocco and South Africa, and guided by Maxwell's own personal experiences, reflect upon how the culture and history of a region might shape mathematical thought and education. James Rauff sends us back in time to look at the ancient rock art of the pre-Columbian inhabitants of Western North America. Viktor Blåsjö shows how we poor Euclideans would fare in a hyperbolic universe.

Janna Raley decided to tackle professor Fred Chen's assignment in an unusual fashion, writing a children's book that doubles as a crash course in game theory; we read about their joint travails and Raley's story as well. Gary Stogsdill turned a "what do I do now" moment into an exercise for students that worked so well he has repeated it in every course he has taught since. Jon Jacobsen looks at mathematics education from the perspective of his early plans to enter a life in sales. Charles Coppin hints at the virtues and rewards of inquiry based learning with an imagined conversation between two inquisitive students.

Karen Morgan Ivy begins our poetry section, with Nilanjan De and Laura Long also contributing. Two announcements wrap up this issue. Enjoy!