

Reasoning and Proof with *The Simpsons* and *Futurama*
NCTM Regional Conference and Exposition
Chicago, IL, November 28, 2012

Dr. Sarah J. Greenwald
Appalachian State University
<http://www.mathsci.appstate.edu/~sjg>

Did you know that *The Simpsons* and *Futurama* contain hundreds of humorous mathematical and scientific references? Because NCTM's Focus of the Year is *Reasoning & Proof*, we will explore the mathematical content and educational value of some favorite moments related to the theme, along with the motivations and backgrounds of the writers, during an interactive talk. Popular culture can reveal, reflect, and even shape how society and students view mathematics, and with careful consideration of the benefits and challenges, these programs can be an ideal source of engaging ways to help develop reasoning and proof skills and to reduce math anxiety. A calculator and writing utensil will be useful. For more information, check out SimpsonsMath.com and FuturamaMath.com.

FURTHER READINGS

- Ascher, Marcia. "A river-crossing problem in cross-cultural perspective." *Mathematics Magazine* 63(1), Feb 1990, pp. 26-29. http://mathdl.maa.org/images/cms_upload/Asher50650798.pdf
- Canada, Dan and Dave Goering. "Deep Thoughts on the River Crossing Game." *Mathematics Teacher* 101(9), May 2008, pp. 632-639.
- Greenwald, Sarah and Andrew Nestler. SimpsonsMath.com
- Greenwald, Sarah and Andrew Nestler. "r dr r: Engaging Students with Significant Mathematical Content from *The Simpsons*." *PRIMUS* XIV(1), March 2004, pp. 29-39. <http://mathsci2.appstate.edu/~sjg/papers/popculture/GreenwaldNestler.pdf>
- Greenwald, Sarah and Jill Thomley. *Encyclopedia of Mathematics and Society* (3 Volumes), Pasadena, CA: Salem Press, October, 2011.
- Greenwald, Sarah. FuturamaMath.com
- Greenwald, Sarah. "Klein's Beer: Futurama Comedy and Writers in the Classroom." *PRIMUS* XVII(1), March 2007, pp. 52-66. <http://mathsci2.appstate.edu/~sjg/futurama/futuramaprimus07.pdf>
- Lane, Matt. "Math Goes Pop: Futurama Theorem." August, 25, 2010. <http://www.mathgoespop.com/2010/08/the-futurama-theorem.html>
- Leake, Lowell. "Did the Scarecrow Really Get a Brain?" *Mathematics Teacher* 79, Sep 1986, pp. 438-439.
- NCTM. "Celebrate Pi Day." <http://www.nctm.org/resources/content.aspx?id=2147483830>
- Pancari, John and John P. Pace. "Two Views of Oz." *Mathematics Teacher* 80, Feb 1987, pp. 100-101.
- Raines, Joan M. "Playing the River Crossing Game." *Mathematics Teacher* 105(4), Nov 2011, p. 320