

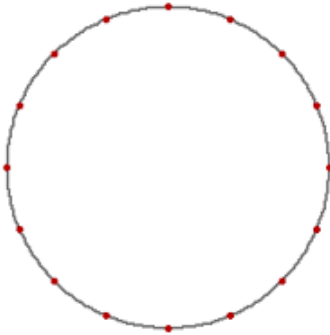
Chapel Hill Math Circle

*Beginners' Group*

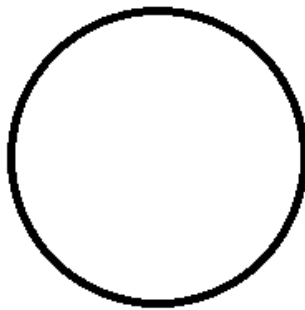
## Games and Puzzles<sup>1</sup>

February 18, 2017

1. Two players take turns drawing segments that connect any two points. The segments cannot cross each other. The player who draws the last segment wins. Who wins this game and why? Play and explore!



2. What happens if there are 15 points? Who wins now and why?



3. Robert, Mark, and Peter take the same bus to school.

Robert: It's funny that our last names are Roberts, Markov, and Peterson.

Another boy: But none of us has the last name that sounds like his first name! For example, my last name is Peterson.

What are the full names of the boys?

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<sup>1</sup> Based on Natasha Rozhkovskaya's *Math Circles for Elementary Students* from the AMS/MSRI Mathematical Circles Library.