Cal Poly Department of Mathematics

Puzzle of the Week

Sep 27 - Oct 3, 2012

What is the width of the narrowest alley in which a car with turning radius r can make a "three-point-turn"?

[Notes: The car should be thought of as a point with no width or length. For more information on the car maneuver see http://en.wikipedia.org/wiki/Three-point_turn]

Solutions should be submitted to Morgan Sherman:

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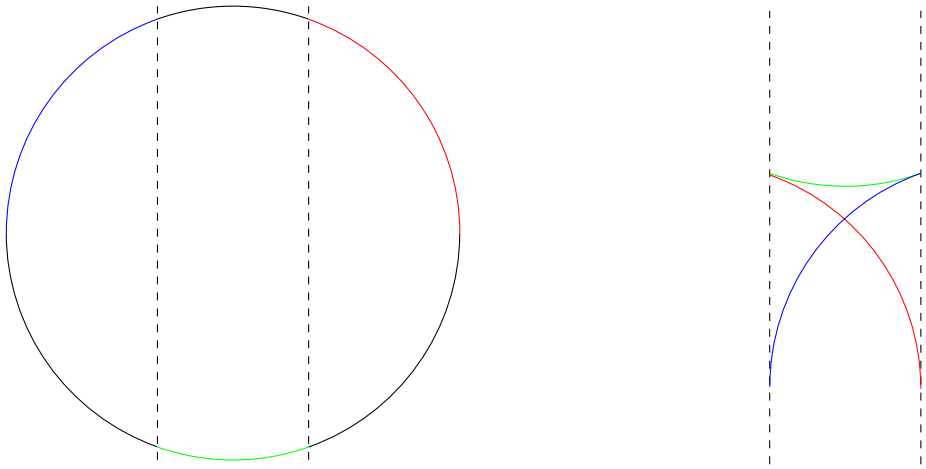
before next Tuesday. Those with correct and complete solutions will have their names listed on the puzzle's web site (see below) as well as in next week's email announcement. Anybody is welcome to make a submission.

http://www.calpoly.edu/~sherman1/puzzleoftheweek

Solution: The narrowest alley has width $\frac{2r}{3}$.

I found this puzzle while browsing the New York Times Numberplay column last spring. Here is a "proof without words":



The reader is encouraged to interpret the above!