

Cal Poly Department of Mathematics

Puzzle of the Week

Nov 15 - 29, 2012

On a given circle there are two fixed points A, B not diametrically opposite each other. Let X denote a variable point on the circle, and let X' be the point diametrically opposite X . Determine the locus of points $AX \cap BX'$ (i.e. the point of intersection of the lines AX and BX') as X varies around the circle.

Solutions should be submitted to Morgan Sherman:

Dept. of Mathematics, Cal Poly

Email: sherman1 -AT- calpoly.edu

Office: bldg 25 room 310

before next Thursday. 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>