



LEWIS AND CLARK COLLEGE

Department of Mathematical Sciences

PUZZLE OF THE WEEK (3/30/2016 - 4/5/2016)

Let \mathcal{C}_1 and \mathcal{C}_2 be two concentric circles, one of radius 1 and one of radius 2. Let $\triangle ABC$ be an equilateral triangle inscribed into the circle \mathcal{C}_1 of radius 1. What are the maximum and the minimum values of the products of lengths $PA \cdot PB \cdot PC$ as P varies along \mathcal{C}_2 ? For what P are these extremes reached? Justify your claim.

- Correct solutions of the Puzzle of the Week #9 were submitted by Toby Aldape, Eli Barnes and Brian Gentry. Congratulations!
- One possible solution of the Puzzle #9 is posted online. (Look for the Puzzle of the Week announcements on the departmental web-page.)
- Solvers should include their full name and some kind of a contact information. Solutions should be submitted to **Iva Stavrov** in BoDine 305; email submissions are encouraged (istavrov at lclark). Solutions should be received by the end of the day on **Tuesday, April 5th 2016**.