



Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: June 2005

Prove that for arbitrary triangle $\triangle ABC$

$$|AB| \cos(\widehat{BCA}) + |BC| \cos(\widehat{BAC}) + |AC| \cos(\widehat{ABC}) \leq \frac{|AB| + |BC| + |AC|}{2}.$$