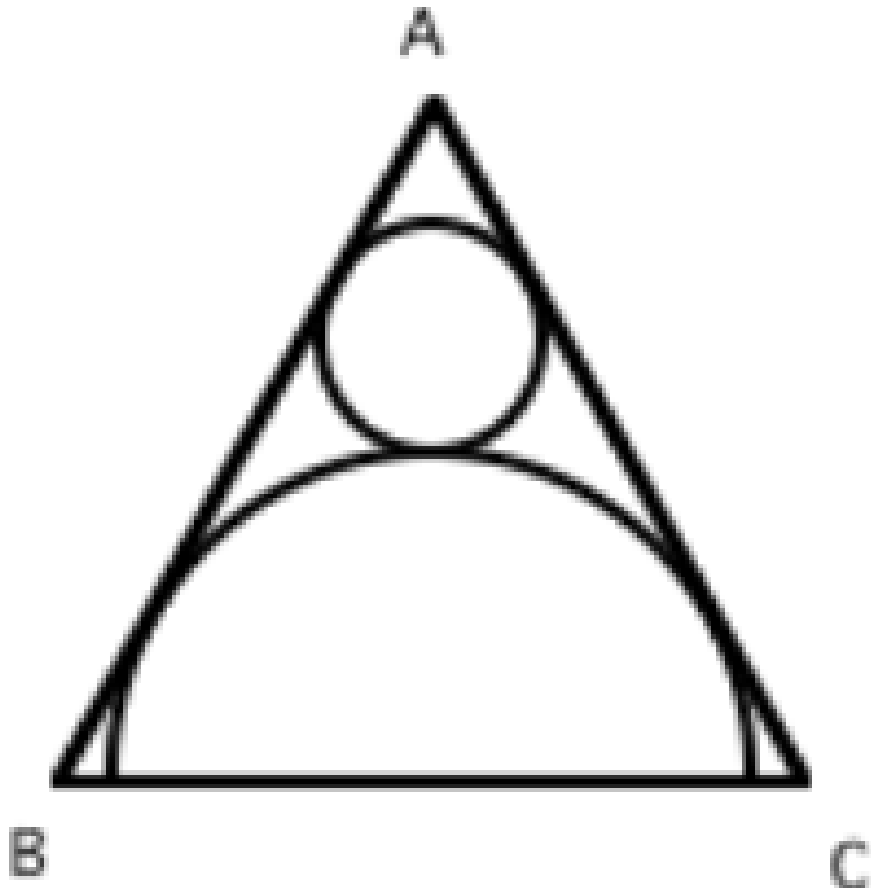


Problem 5: Circles inside a Triangle

In the figure below, an equilateral triangle ABC contains an inscribed semicircle of radius R that is tangent to sides AB and AC , and inscribed circle of radius r that is tangent to the triangle and the semicircle. Find the ratio R/r .



As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 3/18/2018. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 3 pm on 3/30/18.