

# ROMANIAN MATHEMATICAL MAGAZINE

In  $\triangle ABC$  the following relationship holds:

$$\sin A + \sin B + \sin C \geq \frac{3\sqrt{3}r}{R}$$

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*Solution by Daniel Sitaru-Romania*

$$\sin A + \sin B + \sin C = \sum_{cyc} \sin A = \sum_{cyc} \frac{a}{2R} = \frac{1}{2R} \sum_{cyc} a = \frac{2s}{2R} \stackrel{\text{MITRINOVICI}}{\geq} \frac{3\sqrt{3}r}{R}$$

Equality holds for  $A = B = C$ .