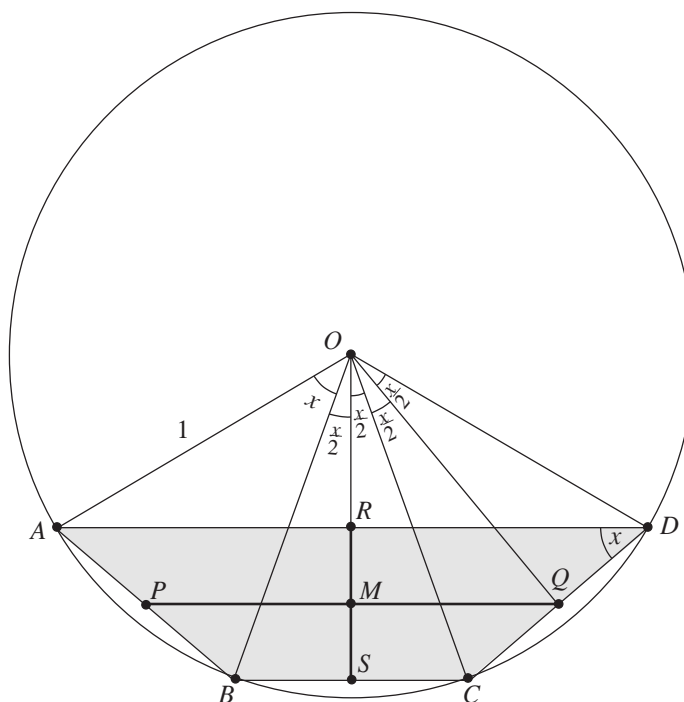


106.23 Proof without words: $\sin 3x = 3 \sin x - 4 \sin^3 x$ 

$$\text{area}(OABCD) - \text{area}(OAD) = \text{area}(ABCD)$$

$$\begin{aligned} \frac{1}{2}(3 \sin x) - \frac{1}{2}(\sin 3x) &= RS \cdot PQ = (CD \sin x)(2OQ \sin x) \\ &= (2 \sin \frac{1}{2}x \sin x)(2 \cos \frac{1}{2}x \sin x) \\ &= 2 \sin^3 x \end{aligned}$$

10.1017/mag.2022.77 © The Authors, 2022

K. B. SUBRAMANIAM

135, Ganit Ashram, Fine Avenue Phase I,
Nayapura Kolar Road, Bhopal, 462042, INDIA

e-mail: kbsubramaniam.1950@gmail.com

AJI THOMAS

Regional Institute of Education (NCERT), Bhopal 462002, INDIA

e-mail: aji.thomas20@gmail.com

Published by Cambridge University Press on behalf of The Mathematical Association