For the second inequality, note that the function $f : x \to x^r$, $r \in \mathbb{N}$ is convex, so using Jensen's inequality:

$$(p_1x_1 + p_2x_2 + \ldots + p_nx_n)^r \leqslant p_1x_1^r + p_2x_2^r + \ldots + p_nx_n^r$$
$$(p_2x_1 + p_3x_2 + \ldots + p_1x_n)^r \leqslant p_2x_1^r + p_3x_2^r + \ldots + p_1x_n^r$$
$$\vdots$$
$$\vdots$$
$$(p_nx_1 + p_1x_2 + \ldots + p_{n-1}x_n)^r \leqslant p_nx_1^r + p_1x_2^r + \ldots + p_{n-1}x_n^r.$$

Summing these inequalities and using $p_1 + p_2 + p_3 + \ldots + p_n = 1$, the second inequality is established.

Correct solutions were received from: P. De, N. Curwen, S. Dolan, M. G. Elliott, M. Hennings, G. Howlett, A. Plaza, S. Riccarelli, and the proposer, D. Marghidanu.

The following solutions were received after the publication date: 108.I, 108.J, 108.K, 108.L (M. G. Elliott), 108.I (C. Jones), 108.K, 108.L (S. Riccarelli).

On a final note, I would like to thank Gerry Leversha for giving me the opportunity to be the Editor of Problem Corner and also for his support in getting me started in the role. I would also thank Bill Richardson for his advice and expert typesetting. I wish them all the best in their retirement.

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A Correction

The Author of Note 109.14 ‘Extensions of a Geometric Inequality’, which appeared in the March 2025 *Gazette*, has pointed out two errors which were overlooked.

The corrected versions are as follows:

- On page 157, the final equation should be

$$IA_1 \times IA_2 \times IA_3 \times IA_4 = 2r^3\left(\sqrt{4R^2 + r^2} - r\right)$$

- The 11th line on page 158, should be

$$\frac{4r^4}{\sin A_1 \sin A_2} = 4r^4 \times \frac{2R^2}{r^2 + r\sqrt{4R^2 + r^2}} = 2r^3\sqrt{4R^2 + r^2}$$

We apologise to Dr Yun for these errors.

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