A Visual Proof of a Theorem of Cyclic Hexagons

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In a previous edition of *Learning and Teaching Mathematics*, Duncan Samson presented a number of different pupil-inspired solutions for showing that the sum of the alternate angles of a cyclic hexagon is 360° (Samson, 2017).

In this short article we make use of the fact that the exterior angle of a cyclic quadrilateral equals the opposite interior angle to provide a simple visual proof of the above result in the form of a 'proof without words'. The proof is a slight modification of Solution 1 as presented by Samson, and we hope this visual approach will be found useful for teachers or students teaching or studying elementary plane geometry.

$$\alpha + \beta + \theta = 360°$$
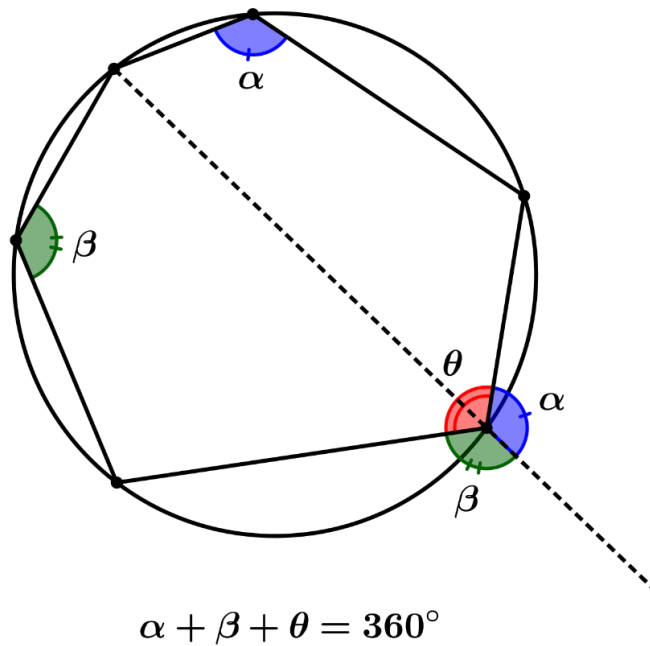
REFERENCES

Samson, D. (2017). Euclidean geometry – Nurturing multiple solutions. *Learning and Teaching Mathematics*, *23*, 15-18.