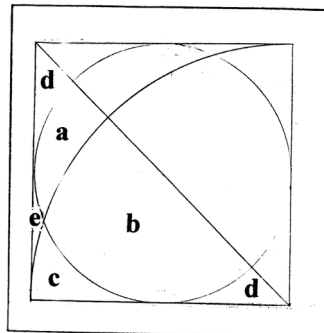
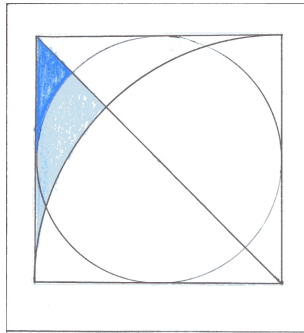


The Scimitar Puzzle: Solution



By the principle of similarity, the area ratio of the larger to the smaller circle is 4:1. Therefore the quadrant of the larger circle has the same area as the smaller circle.

From the symmetry of the diagram, therefore:

$$a + b = b + c + d,$$

i.e. $a = c + d$. (I)

From the symmetry of the diagram:

$$c + e = 2d. \text{ (II)}$$

From (I) & (II):

$$a + e = 3d.$$

The required ratio is thus 3:1.

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