



Problem of the Week

Problem E

Yet Another Suncatcher

A glass suncatcher is in the shape of an equilateral triangle with sides of length 144 mm. The triangle is labeled ABC and divided into 8 smaller sections as follows.

- Sides AB and BC are each divided into 8 segments of equal length.
- Each point of division on AB is connected to its corresponding point of division on BC , creating 7 line segments.
- Each of the 7 line segments is parallel to the third side of the triangle, AC .

One of the sections is coloured blue, as shown. An altitude is constructed from A to D on BC , dividing the blue section into two parts. In the blue section, determine the ratio of the area on the left side of the altitude to the area on the right side of the altitude.

