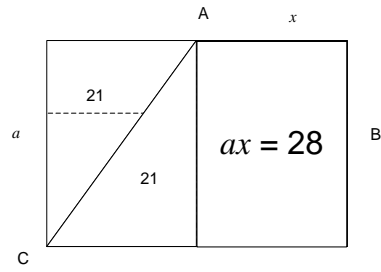


Geometry (Area) Type of Problems in AMC

Problem	Solution
<p>AMC 8 – Beginner Level</p> <p>A, B, C, and D are integers representing the lengths of the rectangles shown below. Given the indicated areas of the rectangles, determine the values of A, B, C, and D.</p> <div style="text-align: center; margin: 10px 0;"> </div>	<p>5 in (A) & 2 in (B) & 4 in (C) & 3 in (D)</p>
<p>AMC 8 – Intermediate Level</p> <p>A, B, C, D, and E are integers representing lengths in inches, as shown below. The central shaded region is a square. Using the given areas of the surrounding rectangles, determine the values of A, B, C, D, and E.</p> <div style="text-align: center; margin: 10px 0;"> </div>	<p>A = 2, B = 6, C = 7, D = 5, and E = 1</p>
<p>AMC 8 – Advanced Level (AMC 10)</p> <p>Four triangles are enclosed in a rectangle as below. If the areas of the three corners are specified, what is the area of the central (shaded) triangle?</p> <div style="text-align: center; margin: 10px 0;"> </div>	<div style="text-align: center; margin: 10px 0;"> </div> $\left(a - \frac{12}{x}\right)\left(x + \frac{42}{a}\right) = 40$ $ax - 12 + 42 - \frac{12 \times 42}{ax} = 40$ $ax - 10 - \frac{2 \times 6 \times 3 \times 14}{ax} = 0$ $(ax)^2 - 10ax - 18 \times 28 = 0$

$$(ax + 10)(ax - 28) = 0$$

Thus, $ax = 28$



The area of the whole rectangle is $28 + 42 = 70$.
 So, the area of the shaded region = $70 - (20 + 21 + 6) = \underline{23} \leftarrow \text{ans}$

