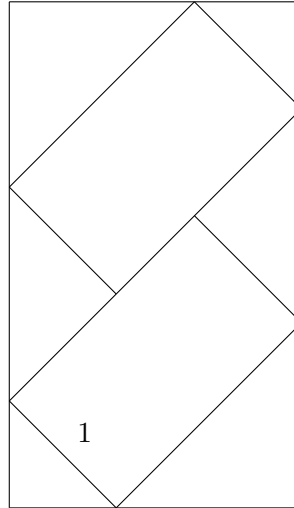## Division A Tiebreakers

1. Ethan has two identical rectangular blocks, each with width 1. To store them, he places them inside a large rectangular box as shown below:

   If the triangle formed in the bottom right corner is isosceles, and all rectangles in the figure are similar, find the area of the rectangular box.

2. Let f be a function over the real numbers satisfying

$$f(x) + f\left(\frac{4x-7}{3x-5}\right) = 2x$$

   for all real numbers $x \in \mathbb{R}\backslash\{\frac{5}{3}\}$. Compute $f(5)$.

3. Compute $2023^{2021^{2019^{\cdot^{\cdot^{\cdot^{3^1}}}}}}$ $\pmod{144}$.