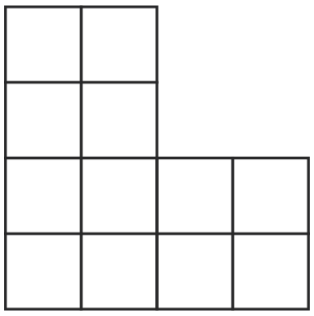
Math 4e. Homework 25.

1. Calculate the value of the expression:

   c. $\frac{5 \cdot 4^{27} - 21 \cdot 4^{26}}{2^{50}}$; *d.* $\frac{3^{51} - 4 \cdot 3^{50}}{9^{26}}$;

2. Can the figure into 4 identical shapes:



3. In the number 52*2*, replace the asterisks with digits so that the resulting number is divisible by 36. List all possible solutions.

4. A rectangle is divided by two segments into four rectangles, the areas of three of which are 2 cm², 4 cm², and 6 cm² (see Fig. 11). Find the area of the fourth rectangle.

2	4
6	?

5. There are three identical boxes on a table. One contains 2 black balls, another contains 1 black and 1 white ball, and the third contains two white balls. The boxes are labeled: "2 white," "2 black," and "black and white." It is known that none of the labels correspond to the actual contents. How can you determine the correct arrangement of the labels by drawing only one ball?

6. Alice and Taylor together weigh 40 kg, Taylor and Maya — 50 kg, Maya and Victor — 90 kg, Victor and Dylan — 100 kg, and Dylan and Alice — 60 kg. How much does Alice weigh?

7. Solve the puzzle (same letters represent same digits):

$$\begin{array}{r} A \\ +\,BB \\ \hline A \\ \hline CCC \end{array}$$