



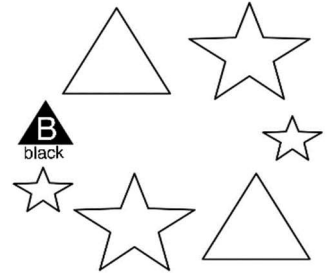
XXVII International Math Olympiad For Elementary School "Two Times Two"

February 11, 2024

Junior group, 2nd grade.

Read the tasks carefully. You can solve them in any order you like. Your answers and solutions must be written on the answer sheet.

Task 1. Seven figures are arranged in a circle. Each has three characteristics: it can be big or small, a triangle or a star, red or black. Every two neighboring figures have exactly two differences among these characteristics. One triangle is colored black, color the rest of the figures.



Task 2. The frog's house is on the edge of the pit. The distance between the house and the frog is exactly 10 jumps. But the frog has the strength for only 7 jumps. If the frog eats a fly on the way, it will double his remaining strength. Where should the fly be placed for the frog to reach the house, but not fall into the pit? *The frog always jumps in one direction until it*

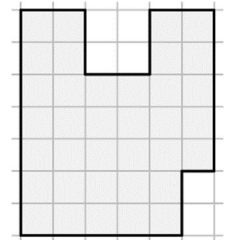


has no more strength.

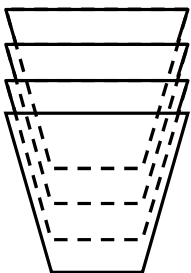
Task 3. Today is February 11, 2024. If the witch drinks the elixir of youth half a year later, she will become one and a half year younger than she was on February 11, 2023. How many years younger does the witch become from drinking the elixir?

Task 4. Replace letters by numbers (different letters should be replaced by different numbers and identical letters should be replaced by the same numbers) to make the following equation true:

$$M - E + TE = LI - C + A$$

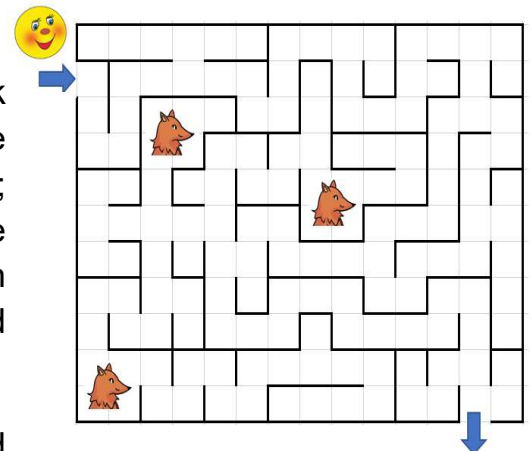


Task 5. Divide the shape to the right into three equal parts (that have the same shape and the same area) following the grid lines.



Task 6. Four buckets: blue, red, green and pink are placed inside one another as shown in the picture. The blue bucket contains the red one; the red one does not contain the green one; the blue bucket is not the lowest, and the green bucket contains another bucket, but not the red one.

How are the buckets placed?



Task 7. The pancake man has to go through a maze and avoid being eaten by a fox. A fox can eat the pancake if it can reach the pancake without crossing any walls. Build one wall 1 cell long so that the pancake can safely go through a maze.

Task 8. There are 2 blue and 3 red tokens. Valentino and Pedro shared the tokens. Valentino said, "I have more tokens than you!" Pedro replied, "I have more red tokens than you!" Both lied. Which tokens did each boy get?