White level

1. **(5 credits)** Thumbelina asked old Mr. Mole how old he was. Mr. Mole replied: “If you multiply my age by 3, and then subtract 16, you will get 17”. How old was Mr. Mole?

2. **(5 credits)** When Robinson Crusoe looked at his calendar, he thought, 'In 363 days the number of the day will be 14 times greater than today.' In what month and on what day did Robinson Crusoe look at the calendar?

3. **(7 credits)** Professor Dumbledore eats the same number of lemon drops every day. Lemon drops are sold in large, medium or small packages. The large package contains three times more lemon drops than the small one, and the medium package contains two times more lemon drops than the small one. All lemon drops in the big package will be eaten by Dumbledore in exactly 50 days. How many days does Dumbledore need to eat all lemon drops in the medium package?

4. **(8 credits)** Bill Weasley was 30 years old when his daughter Victoire was born. How old is Bill in 2020, if he was six times her age on her birthday in 2006?

5. **(10 credits)**The Brave Little Tailor cut the square piece of fabric into 7 parts along three straight lines that do not go through the vertices of the square and got three pentagons. How many corners do the remaining four figures have?

6. **(10 credits)** Two vertices of a square lie on the abscissa axis, and the other two vertices lie on the parabola y = x2. What is the area of this square?

7. **(12 credits)** Edward Scissorhands and his brother cut two identical rectangles into parts. Edward got two rectangles with a perimeter of 8 cm, and his brother got two rectangles with a perimeter of 13 cm. What perimeter did the original rectangles have?

8. **(13 credits)** In the division sentence AB / CD = E, different letters represent different digits appearing in descending order. Find the dividend.

9. **(15 credits)** A pair of natural numbers (a, b) satisfies the equation ab + a + b = 2020. Find all possible values of the sum a+b (list them separated by commas in your answer).

10. **(15 credits)** There are n knights on the chessboard. Among any 8 knights, there is always at least a pair of knights that can beat each other. What is the largest possible n?