Scholastic Math League 2018/2019

Problems for grades 5 & 6

Set no. 6 (solutions should be handed in by March 28th, 2019)

Problem 1

There are 26 apples altogether lying on three plates numbered 1, 2 and 3. There are 8 apples on plate no. 2. The sum of apples on plates no. 1 and 2 together is greater by 4 than the sum of apples on plates no. 2 and 3 taken together. How many apples are there on each and every plate?

Problem 2

The sum of two numbers is 34845. One of the two numbers has two trailing zeros. If you remove those trailing zeros you actually get the other number. What are the two numbers? Support your solution with justified explanation.

Problem 3

Put eight integers: 1, 2, 3, 4, 5, 6, 7, 8 in the vertices of a cube in such a way that the sum of the numbers on each wall is the same.

Problem 4

What time is it? – someone asked Pythagoras of Samos.

Out of the whole day and night (24 hours) there is still 2/3 left of what has just passed since midnight. – answered the philosopher.

What time was it back then? Support your solution with justified explanation.

Problem 5

A 3-meter long rope was cut up into 5 pieces. The first piece is 1.5 m long, whereas the second one is twice as short. The third piece is of the same length as the forth one, whereas the fifth piece is 10 cm shorter than the third one. What is the total length of all of the five pieces?

N.B. All of the solutions to the problems should be logically supported and explained!