

SCHOLASTIC (familial) MATH LEAGUE 2020/2021

Math problems for primary school grades 7 and 8

Set 1 /deadline October 15, 2020 /

Problem 1

Ducks, grebes and one swan were swimming in the pond.
Ducks accounted for $\frac{5}{12}$ of all these birds, and grebes for $\frac{9}{16}$.
How many birds swam in the pond?

Problem 2

Wojtek's age is now 40% of Asia's age, and in 5 years it will be 60% of her age.
Now, how old is Wojtek and how old is Asia?

Problem 3

In a regular quadrilateral prism, the height is twice as long as the edge of the base.
The total area of the prism is equal to the total area of the cube whose edge is 5 cm long.
Calculate the volume of that prism.

Problem 4

The square is divided into two rectangles such that the ratio of their perimeters is 7 : 5.
Calculate the ratio of the area of the larger rectangle to the area of the smaller rectangle.

Problem 5

The ratio of the angles in a triangle is as follows 1: 8: 9.
What kind of triangle is it?