

Propaedeutic Learning of Geometry in the Fifth and Sixth Grade as a Foundation for School Students' Personal Development

MARET B. VISITAEVA

старший преподаватель, кафедра физики и математики, Чеченский институт повышения квалификации работников образования;
30, ул. Х. Кишиевой, г.Грозный, 364037, Чеченская Республика, Russia;
E-mail: maretvis@rambler.ru

MIHAIL I. ZAYKIN

Doctor of Pedagogy Sciences, Professor, заведующий кафедрой математики, теории и методики обучения математики, Арзамасский государственный педагогический институт;
36, К.Маркса ул., Arzamas, 607220, Russia;
E-mail: mzaykin@yandex.ru

The article discusses the problem of studying propaedeutics in geometry in the context of school student's personal development. It supplies analytical data regarding concepts, which support integrated learning of sterometry and planimetry. The author presents an original scheme for learning (applying) propaedeutics in the context of school students' personal development. At that, the author uses the term “interpenetrating figures”, which was introduced by I.S. Yakimanskaya for flat, two dimensional solid figures. The term was specified by the author for three cases (one, two and three dimensional figures). Based on consideration of the differences between school students in their approach to solving geometrical problems, there are two types of problems: 1) problems aimed at imagination without any perceptive support; 2) problems aimed at imagination with perceptive support. The author comes to the conclusion that it is impossible to achieve high educational levels without basic training in geometry. Therefore, the circle of school students, that consider mathematics in general and geometry in particular to be professionally significant, widens.

Key words: Propaedeutics in Geometry; Instructional Blocks; Interpenetrating Figures; Analogy, Left and Right Brain; Open Problems, Motivation; Immediate and Immediate Development; Personality of a School Student.