

In the work we modify the well-known minimal surface problem to a very special form, where the exponent two is replaced by a general positive parameter. To the modified problem we define four notions of solution in nonreflexive Sobolev space and in the space of functions of bounded variation. We examine the relationships between these notions to show that some of them are equivalent and some are weaker. After that we look for assumptions needed to prove the existence of solution to the problem in the sense of definitions provided. We outline that in the setting of spaces of functions of bounded variation the solution exists for any positive finite parameter and that if we accept some restrictions on the parameter then the solution exists in the Sobolev space, too. We also provide counterexample indicating that if the domain is non-convex, the solution in Sobolev space need not exist.