

**THE IMPORTANCE OF STUDYING  $\varphi(x) = \cos(ax^2)$  FUNCTIONS IN  
STRENGTHENING STUDENTS' KNOWLEDGE OF TRIGONOMETRIC  
FUNCTIONS**

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**ABSTRACT**

*This paper discusses the problem of determining and plotting the properties of functions of type with trigonometric functions. Trigonometric functions are included in the functions that represent many practical processes. In particular, when, the function is in views, and this function has different views and properties at different values of parameters. A number of scientific and methodological conclusions can be drawn from the study of cases occurring at different values of these parameters. Below are cases for the parameters of this function, the main properties of such functions are described in detail, and the graphs of the function are drawn in the modern graphic program GeoGebra.*

**KEYWORDS:** *Function, Trigonometric Function, Quadratic Function, Function Properties, Function Graph.*

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