

ELEMENTARY GEOMETRY APPLICATION IN MATHEMATICAL ANALYSIS

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ABSTRACT

From all theorems of elementary geometry in school, there are many important theorems as Pythagorean Theorem and law of sines, and there are many theorems that can evoke total ignorance e.g. 1. If in right-angled triangle is drawn an altitude to the hypotenuse, then square of cathetus is middle-proportional between hypotenuse and this cathetus projection on hypotenuse. 2. There is Ptolemy's theory about inscribed quadrilateral in circle. If we draw circle and inscribe quadrilateral in it then in inscribed quadrilateral product segments of diagonals are equal. For these theorems still have not find applications.

Keywords: cathetus, theorem, mathematical analysis

1 GENERAL

We offer to use both theorems in mathematical analysis. With the first theorem and a compass and ruler it is possible to construct $y = \sqrt{f_1(x) \cdot f_2(x)}$ in which one of the function is hypotenuse and other is cathetus projection on hypotenuse. Conducting this research, we verified theorem: if in a right-angled triangle is drawn an altitude, which is equal with 1, then cathetus multiplication is equal with hypotenuse. Using Ptolemy theorem we can construct a graphic for function $y = f_1(x) \cdot f_2(x)$, when function graphic for both are known.

REFERENCES

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