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A study on the conversion of the formula for the area of a trapezoid.

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Summary: The formula for the area of a trapezoid is an educational material that can handle algebraic and geometric perspectives simultaneously. In this note, we will make up the expression algebraically equivalent to the formula for the area of a trapezoid, and deal with the conversion of a geometric point of view, in algebraic terms of translating and interpreting the expression geometrically. As a result, the geometric conversion model, the first algebraic model, and the second algebraic model are obtained. Therefore, this problem is a good material to understand the advantages and disadvantages of the algebraic and geometric perspectives and to improve the mathematical insight through a complementary activity. In addition, these activities can be used as material for enrichment and gifted education, because it helps cultivate a rich perspective an diverse and creative thinking and mathematical concepts.

Classification: G30

Keywords: algebraically equivalent expression; geometrical conversion; area of a trapezoid