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RESEARCH ARTICLE

Evaluating Some Integrals with Maple

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Abstract—This paper uses the mathematical software Maple for the auxiliary tool to evaluate two types of integrals. We can obtain the closed forms of these two types of integrals by using Euler's formula, DeMoivre's formula, and finite geometric series. In addition, we provide two integrals to do calculation practically. The research methods adopted in this study involved finding solutions through manual calculations and verifying these solutions by using Maple. This type of research method not only allows the discovery of calculation errors, but also helps modify the original directions of thinking from manual and Maple calculations. Therefore, Maple provides insights and guidance regarding problem-solving methods.

Keywords— integrals; closed forms; Euler's formula; DeMoivre's formula; finite geometric series; Maple

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