## Computing two special cases of Gauss hypergeometric function

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## Abstract.

In this paper, a computational technique is given to re-obtain the explicit forms of two cases of the Gauss hypergeometric function  $_2F_1(a, b, c; x)$  for b = a + 1/2 and c = 1/2, 1/3. Some special identities related to the two aforesaid cases are also introduced. Finally a special Maple package, called FormalPowerSeries (FPS), is used to automatically compute some results given in the paper.

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