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*On Certain Combinations of Higher Powers of Fibonacci Numbers,*

**Abstract**

We present identities that we feel can be regarded as higher order analogues of the well-known identity $F_{n}^2 + F_{n+1}^2 = F_{2n+1}$. We give three theorems corresponding to the powers 4, 6, and 8. We also state two conjectures that give the form of similar identities that involve higher powers.