

A Generalized Algorithm for producing Integer Power Reduction Formulas of Cosine

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The idea behind this algorithm was inspired by a video entitled *$\cos(1) + \dots + \cos(n)$* by Peyam R. Tabrizian
<https://www.youtube.com/watch?v=7LBQTpiK-Xg>

Prior to seeing this video, I understood that complex numbers stemmed from the idea that $\sqrt{-1} = i$, and that complex numbers had some properties and could be dealt with in particular ways, but I did not believe they had any utility.

After watching the video however, I became a believer. So I present a way a way I've discovered, for generating the integer power reduction formulas for cosine which hinges on the imaginary representation of cosine.