ON DIFFERENCE OF TWO SUMS OF TWO SQUARES

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Abstract: The below formula shows that every integer can be expressed as a difference of two sums of two squares.

$$n = \left\{\left(\frac{(n+1)(n+2)}{2}\right)^2 + \left(\frac{n(n+1)(n+2)}{2}\right)^2\right\} - \left\{\left(\frac{n(n+1)}{2}\right)^2 + \left(\frac{n(n+1)(n+2)}{2} + 1\right)^2\right\}$$

PROOF

The formula can be proved by directly expanding each term on the right hand side of the equation.

NOTE: If the above formula or any of my other work is worthy of publication, help is needed on writing a paper on it as i am an amateur mathematician who spends his leisure time on maths so, i have no idea on how to write maths paper because i major in computer science. You can check out my other work by visiting this webpage: **http://vixra.org/author/suaib_lateef**

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