6-2007

Proof without Words: A Graph Theoretic Decomposition of Binomial Coefficients

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Recommended Citation
DeMaio, J. (2007). Proof without words: A graph theoretic decomposition of binomial coefficients. Mathematics Magazine, 80(3), 182.

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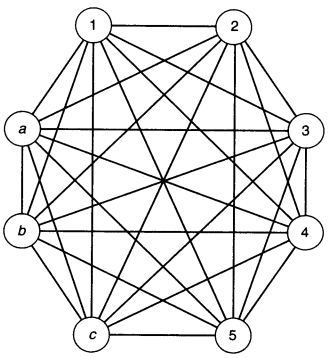
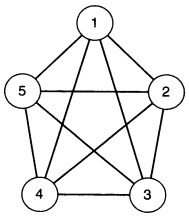
$$\binom{n+m}{2} = \binom{n}{2} + \binom{m}{2} + nm$$

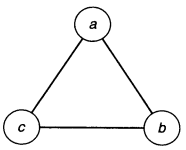
E.g., $n = 5, m = 3$.



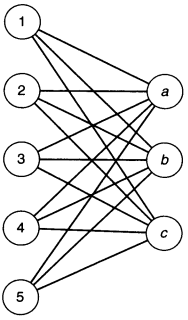
K_8



K_5



K_3



$K_{5,3}$

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