wein and Bailey in [2, pp. 195–197]. Similarly, one can derive an induction-free proof to the volume formula of generalized balls (2) using the Laplace transform. Finally, we remark that more properties on the gamma function and volume of Euclidean balls can be found in Stromberg [7, pp. 394–395].

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REFERENCES

Proof Without Words: A Triangular Sum

\[ t(n) = 1 + 2 + \cdots + n \rightarrow \sum_{k=0}^{n} t(2^k) = \frac{1}{3} t(2^{n+1} + 1) - 1 \]

\[ t(2^{n+1} + 1) - 3: \]

\[ 3 \sum_{k=0}^{n} t(2^k) = t(2^{n+1} + 1) - 3 \]

Exercises: (a) \[ \sum_{k=1}^{n} t(2^k - 1) = \frac{1}{3} t(2^{n+1} - 2) \]

(b) \[ \sum_{k=0}^{n} t(3 \cdot 2^k - 1) = \frac{1}{3} [t(3 \cdot 2^{n+1} - 2) - 1] \]

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