1. *Вершины суть линейно независимые точки в E_n.*

2. *Все стороны равны.*

3. *Плоскость $A_1A_kA_{k+1}$ перпендикулярна к $(k-1)$-мерному линейному пространству $A_1A_2 \ldots A_k$ $(k = 3, 4, \ldots, n)$.*

4. *Все углы какой-либо стороны с какой-либо другой стороной равны и определены уравнением* $\cos \alpha = \frac{1}{n}$.

5. *Объём выпуклой оболочки определяется по формуле*

$$V_n = \frac{a^n}{n!}\sqrt{\frac{(n+1)^{n-1}}{n^n}}.$$

Автор выводит ещё несколько теорем об углах диагоналей и сторон.

Summary

ON THE SIMPLEX POLYGON WITH THE GREATEST VOLUME OF ITS CONVEX HULL

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In this paper there are proved some properties of the simplex polygon in n-dimensional Euclidean space E_n the convex hull of which has the greatest volume with a given circumference. The main results are obtained in the following theorems ($A_1, A_2, \ldots, A_{n+1}$ indicate the vertices, a the side of the simplex polygon):

1. *The vertices are linearly independent points in E_n.*

2. *All sides are equal.*

3. *The plane $A_1A_kA_{k+1}$ is perpendicular to $(k-1)$-dimensional linear space $A_1A_2 \ldots A_k$ $(k = 3, 4, \ldots, n)$.*

4. *The angles of any two sides are equal and given by the equation* $\cos \alpha = \frac{1}{n}$.

5. *The volume of the convex hull is expressed by the formula*

$$V_n = \frac{a^n}{n!}\sqrt{\frac{(n+1)^{n-1}}{n^n}}.$$

The author deduces some more theorems about the angles of diagonals and sides.