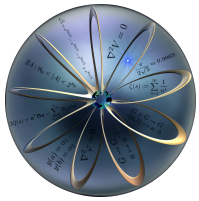

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homogeneous polynomial

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A polynomial $P(x_1, \cdots, x_n)$ of degree k is called homogeneous if $P(cx_1, \cdots, cx_n) = c^k P(x_1, \cdots, x_n)$ for all constants c.

An equivalent definition is that all terms of the polynomial have the same degree (i.e. k).

Observe that a polynomial P is homogeneous iff $\deg P = \operatorname{ord} P$.

As an important example of homogeneous polynomials one can mention the symmetric polynomials.