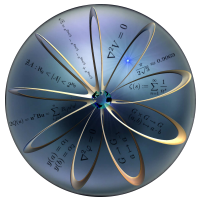

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## symmetric tensor

| | |
|---|---|
| Canonical name | SymmetricTensor |
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Let $V$ be a vector space over a field. Let $S_n$ be the symmetric group on $\{1,\ldots,n\}$. An order-n `http://planetmath.org/TensorProduct`tensor $A \in V^{\otimes n}$ is said to be  if $P(\sigma)A = A$ for all $\sigma \in S_n$, where $P(\sigma)$ is the permutation operator associated to $\sigma$. The set of symmetric tensors in $V^{\otimes n}$ is denoted by $S^n(V)$.