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counting theorem

Canonical name	CountingTheorem
Date of creation	2013-03-22 12:22:23
Last modified on	2013-03-22 12:22:23
Owner	mathcam (2727)
Last modified by	mathcam (2727)
Numerical id	12
Author	mathcam (2727)
Entry type	Theorem
Classification	msc 20M30
Synonym	Cauchy-Frobenius-Burnside formula

Given a group action of a finite group G on a finite set X , the following expression gives the number of distinct orbits

$$\frac{1}{|G|} \sum_{g \in G} \text{stab}_g(X)$$

Where $\text{stab}_g(X)$ is the number of elements fixed by the action of g .