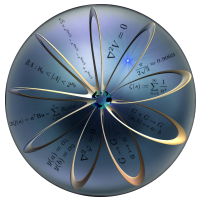

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conjugacy class

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Let G a group, and consider its operation (action) on itself give by conjugation, that is, the mapping

$$(g, x) \mapsto gxg^{-1}$$

Since conjugation is an equivalence relation, we obtain a partition of G into equivalence classes, called *conjugacy classes*. So, the conjugacy class of X (represented C_x or $C(x)$ is given by

$$C_x = \{y \in X : y = gxg^{-1} \text{for some } g \in G\}$$