

1.77: Order

If G is a group consisting of a finite number of elements, this number of elements is the **order** of G . For example, the point group $m\bar{3}m$ has order 48.

For an element g of a (not necessarily finite) group G , the **order** of g is the smallest integer n such that g^n is the identity element of G . If no such integer exists, g is of **infinite order**. For example, the rotoinversion $\bar{3}$ has order 6 and a translation has infinite order. An element of order 2 is called an **involution**.

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