Please complete the following definitions.

• Given a subgroup $H$ of a group $G$ and an element $x \in G$, the right coset $Hx$ is the subset

$$Hx = \{ \}$$

• A subgroup $H$ of a group $G$ is said to be *normal in* $G$ if

• A function $f: G \to G'$ between groups $G$ and $G'$ is a *homomorphism* if

• If $f: G \to G'$ is a homomorphism, then its *kernel* is $\ker f = \{ \}$