

FROM GROUPS TO GROUP RINGS – AND BACK

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From a finite group G and a commutative ring R we can form the group ring RG . An old and famous question is whether a group is determined by its integral group ring, i.e. does $\mathbb{Z}G \simeq \mathbb{Z}H$ (as rings) imply that $G \simeq H$ (as groups)? However there are also more interesting things to be discovered in the unit group of group rings RG ; here we will be mainly discuss the case of finite subgroups of $\mathbb{Z}G$.