

$p$ -groups

# Definition

Let  $G$  be a finite group, and  $p$  a prime.

## Definition

$G$  is a  $p$ -group if  $|G|$  is a power of  $p$ .

## Definition

A subgroup  $H \subset G$  is called a  $p$ -subgroup if  $H$  is a  $p$ -group.

## Definition

A  $p$ -subgroup  $H \subset G$  is called a  $p$ -Sylow subgroup if  $(G : H)$  is relatively prime to  $p$ .