

### Math-113, Homework 9

**A.** For each of the four rings  $R$  below determine the corresponding group of units  $R^\times$  and classify it according to the Fundamental Theorem of Finitely Generated Abelian Groups. In all cases justify your answer.

- $\mathbb{Z}_{15}$
- $\mathbb{Z}_{16}$
- $\mathbb{Z}_{20}$
- $\mathbb{Z}_{30}$