

Section X.1 Homework

ORAL:

1. Show that 5 is irreducible in $\mathbb{Z}[\sqrt{-6}]$.
2. Factor 11 in $\mathbb{Z}[\sqrt{-7}]$. Make sure to prove that your factors are irreducible.

WRITTEN:

3. Show that $3 + \sqrt{-6}$ is irreducible in $\mathbb{Z}[\sqrt{-6}]$.
4. Factor $1 + 5\sqrt{-3}$ in $\mathbb{Z}[\sqrt{-3}]$. Make sure to prove that your factors are irreducible.
5. Factor 15 in two ways in $\mathbb{Z}[\sqrt{-11}]$.