Homework 7, Due Wed, March 28

This homework must be done individually. Remember to follow Math department's guidelines for homework. Please write your solutions neatly. Typesetting in LaTeX is appreciated and encouraged. **Always show your work and justify your answers.**

1. Complete Task 3 on page 7 of PSP.

2. Let $\alpha = 9 - 5i$ and $\beta = -9 + 13i$ be Gaussian integers in $\mathbb{Z}[i]$. Find $\gamma = \gcd(\alpha, \beta)$ and express γ as a linear combination of α and β. Is this gcd unique? If not, write down all possible gcd's for α and β.