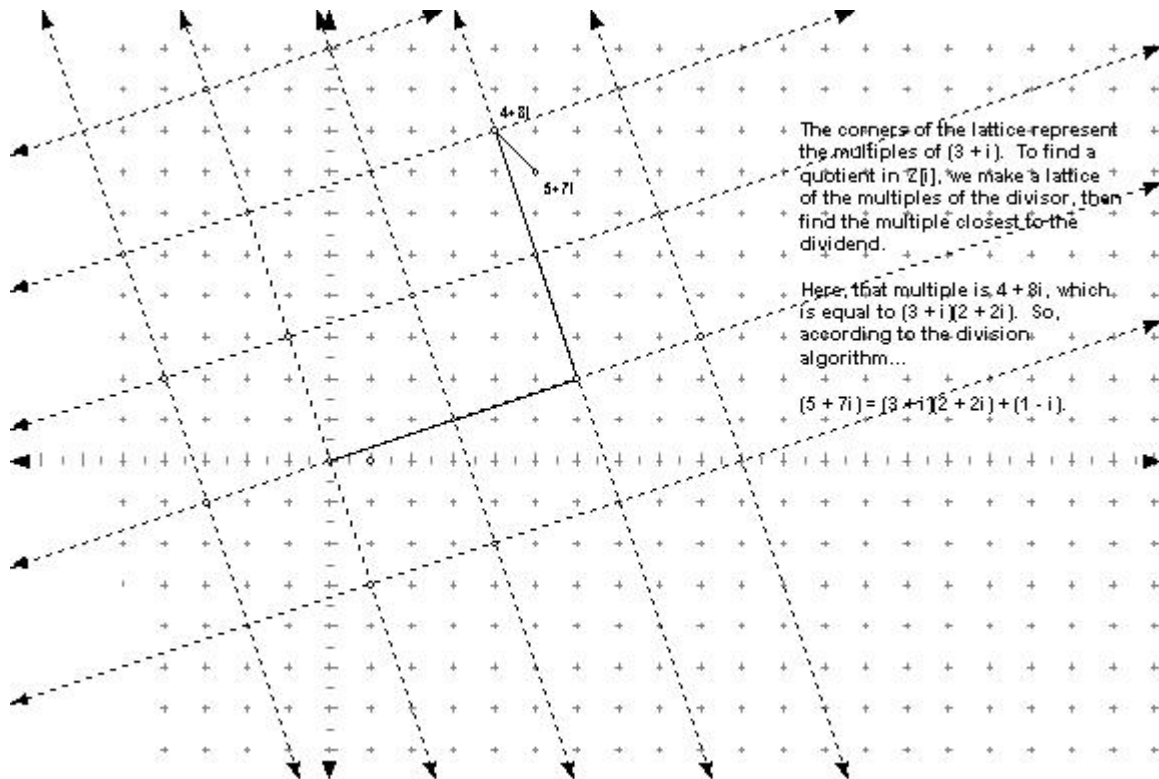


## Handout for Session 13



The text on the lattice reads as follows:

The corners of the lattice represent the multiples of  $(3+i)$ . To find a quotient in  $\mathbf{Z}[i]$ , we make a lattice of the multiples of the divisor, then find the multiple closest to the dividend.

Here, that multiple is  $(4+8i)$ , which is equal to  $(3+i)(2+2i)$ . So, according to the division algorithm...

$$(5+7i) = (3+i)(2+2i) + (1-i)$$