Appendix 5:  Pictures of prime numbers and ideals for complex fields of class number 2

The pictures show the quadratic character and a picture of prime numbers, units and non-principal prime ideals for some complex quadratic fields of class number 2, namely the fields of discriminant congruent 0 modulo 4:

\[ \mathbb{Q}(\sqrt{-5}), \mathbb{Q}(\sqrt{-6}), \mathbb{Q}(\sqrt{-10}), \mathbb{Q}(\sqrt{-13}), \mathbb{Q}(\sqrt{-22}) \]

and the fields of discriminant congruent 1 modulo 4:

\[ \mathbb{Q}(\sqrt{-15}), \mathbb{Q}(\sqrt{-35}), \mathbb{Q}(\sqrt{-51}), \mathbb{Q}(\sqrt{-91}), \mathbb{Q}(\sqrt{-115}), \mathbb{Q}(\sqrt{-123}), \mathbb{Q}(\sqrt{-187}), \mathbb{Q}(\sqrt{-235}) \]

The pictures display the prime numbers, which generate the principal prime ideals, but not those irreducible numbers which are not prime. Moreover, the non-principal prime ideals are displayed as follows. The non-principal ideals are obtained by dividing principal ideals by a certain non-principal prime ideal, \( I \), generated by its norm and some integer of \( \mathbb{Q}(\sqrt{r}) \). In the picture, the non-principal prime ideals then are represented by those numbers whose norm is equal to a prime norm times the norm of \( I \). This norm of \( I \) is mentioned at the top of the picture.