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Class invariants by Shimura's reciprocity law

par Alice GEE

Abstract. We apply the Shimura reciprocity law to determine when values of modular functions of higher level can be used to generate the Hilbert class field of an imaginary quadratic field. In addition, we show how to find the corresponding polynomial in these cases. This yields a proof for conjectural formulas of Morain and Zagier concerning such polynomials.

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