

The numerical difficulties encountered by the possible multiple roots in the cubic (10.9) taken modulo  $p$  actually occur in practice and are not without theoretical interest. If  $\eta_0$  satisfies (12.1), then (in the homomorphic image),  $\eta_1$  becomes a conjugate of  $\eta_0$ . Thus if the iteration restarts on  $\eta_1$ , no multiple root occurs for  $\omega$ . The net effect is to miss one stage of iteration.

In summary, as in the earlier work [19], the homomorphism into rational arithmetic in  $\mathbb{Z}/p\mathbb{Z}$  produces a much simpler procedure than we might have expected from the modular equations, (which are rarely written out explicitly).

## References

19. Cohn, H.: Iterated ring class fields and the icosahedron. *Math. Ann.* **255**, 107–122 (1981)
20. Kalfoten, E., Yui, N.: Explicit construction of the Hilbert class fields of imaginary quadratic fields with class numbers 7 and 11. *EUROSAM 84. Lecture Notes in Computer Science*, Vol. 174, pp. 310–320. Berlin, Heidelberg, New York: Springer 1984
21. Klein, F.: Über die Transformation siebenter Ordnung der elliptischen Funktionen. *Math. Ann.* **14**, 428–471 (1879)
22. Klein, F.: Über die Transformation elfter Ordnung der elliptischen Funktionen. *Math. Ann.* **15**, 533–555 (1879)
23. Magnus, W.: *Noneuclidean tessellations and their groups*. New York: Academic Press 1974

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## *Errata in [19]*

p. 109 line 8 for “and only these” read “among others”

p. 110 Table 1 for  $\eta^2 - 10\eta - 5$  read  $\eta^2 - 10\eta + 5$   
           for  $\zeta' - \varepsilon$            read  $\zeta' + \varepsilon$   
           for  $\zeta - \varepsilon$            read  $\zeta + \varepsilon$

p. 114 Table 4 (titles) for  $k_l$  read  $k_1$   
                           for  $18(9 - 14\sqrt{5})$  read  $18(9 - 4\sqrt{5})$

p. 114 line  $-2$  for  $m + m + \dots + mb^r$  read  $m + mb + \dots + mb^r$

p. 116 (4.7d) denominator reads  $(1 - \eta)\xi^{1/3}$ .