Corrigendum: "Galois groups of trinomials"

(Acta Arith. 54 (1989), 43–49)

by

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The article [1] contains serious errors: in particular, Lemma 3 dealing with the primitivity of the Galois groups of trinomials is false in the generality stated and Section 4 contains an incorrect application of a theorem of Jordan on primitive groups. Thus the conclusions of the theorems and the examples which follow are not justified by the working of the paper and are withdrawn as such. I apologise for any confusion these claims may have caused.

Nevertheless, some of the ideas of the paper are useful and the principle of first establishing the primitivity of the absolute Galois group of the specific type of irreducible integer trinomial discussed in [1] is a sound one. This is evidenced by papers of Movahhedi and Salinier [3] and Cohen, Movahhedi and Salinier [2] in which different ideas are introduced to develop significant results and examples of the same general nature. (Preprints are available.) Further applications of group theory will show that the Galois group of an irreducible integral trinomial is the alternating or symmetric group in very general circumstances.

The shortcomings in [1] were pointed out to me some time ago by G. Turnwald (Tübingen), R. Odoni (Glasgow) and A. Movahhedi and A. Salinier (Limoges). I am grateful to them for further discussions on the problem.

References

[1]   S. D. Cohen, *Galois groups of trinomials*, Acta Arith. 54 (1989), 43–49.
[2]   S. D. Cohen, A. Movahhedi and A. Salinier, *Double transitivity of Galois groups of trinomials*, submitted.
[3]   A. Movahhedi and A. Salinier, *The primitivity of the Galois group of a trinomial*, J. London Math. Soc., to appear.

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