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CORRIGENDUM TO: TWO NEW PROOFS OF THE FACT THAT TRIANGLE GROUPS ARE DISTINGUISHED BY THEIR FINITE QUOTIENTS

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Abstract. This brief corrigendum corrects some minor errors in the paper 'Two new proofs of the fact that triangle groups are distinguished by their finite quotients', published in the *New Zealand Journal of Mathematics* **52** (2022), 827–844.

In the 2022 paper [**1**] published in a special issue of this journal dedicated to the late Sir Vaughan Jones, some small errors were made. None of these had any major effect on the paper, but nevertheless they need correction. The first two involved statements in a Lemma that was given without proof, while the other three involved statements in the text about a set of triples used for illustrating the importance of parts of the argument.

The errors and their corrections are as follows:

(1) In Lemma 2.1, the equation $de = klm\,\mathrm{lcm}(k,l,m)$ omitted a division symbol and should be $de = klm/\mathrm{lcm}(k,l,m)$, while the orders k', l' and m' of the images in the abelianisation of the canonical generators of $\Delta(k,l,m)$ were given as $k' = \gcd(k,lm)$, $l' = \gcd(l,km)$ and $m' = \gcd(m,kl)$, and should be $k' = \gcd(k,\mathrm{lcm}(l,m))$, $l' = \gcd(l,\mathrm{lcm}(k,m))$ and $m' = \gcd(m,\mathrm{lcm}(k,l))$. The corrected statements are easy to justify by considering for each prime divisor p of $\mathrm{lcm}(k,l,m)$, the largest powers of p that divide each of k, l and m.

(2) In the definition of the set $\mathcal{T}$ on page 834, the condition $d = \gcd(r,s,t) = \gcd(u,v,w)$ should be $d = \gcd(r,s,t) = \gcd(u,v,w) < 2000$.

(3) On pages 840 and 841, the size of $\mathcal{T}$ was given as 542695, but should be 542970, as stated earlier on page 834.

References

[1] M. Conder, *Two new proofs of the fact that triangle groups are distinguished by their finite quotients*, New Zealand J. Math. **52** (2022), 827–844. Doi: 10.53733/193

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