

CORRESPONDENCE

To the Editor of *The Mathematical Gazette*

DEAR SIR,—Mr. Leigh Silver ends his article (*The Mathematical Gazette*, No. 363, p. 1) by remarking that musical theory and mathematics have gone hand in hand from the earliest times, but that music itself has not been influenced appreciably. Mr. Leigh Silver shows in his article that he himself could be described as being similarly mathematical; he shows considerable grasp of musical theory, but rather less of music. I found that, of his “curiosities”, the most curious was his statement (p. 8) that “A small group of atonalists have (used) a 12-note scale, but their compositions can hardly be classified as music.”

By Mr. Leigh Silver’s own criterion, it would seem that a mathematical journal might contain items on musical theory but not on music; in any case I would not have thought that the pages of the *Gazette* were a suitable place for this sort of comment.

Yours faithfully, B. L. MEEK

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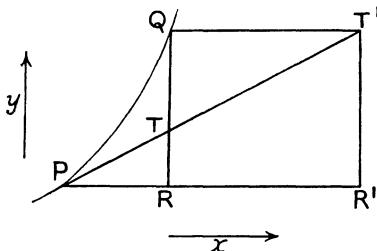
DEAR SIR,—

(i) A Paradox—Hugh Thurston;

(ii) Units and Symbols in mechanics—H. V. Lowry
(*The Mathematical Gazette*, Feb. 1964).

(i) I wonder how seriously Hugh Thurston intends his paradox about differentials to be taken; it is certainly not to be derived from the texts he cites. May I add to these de la Vallée Poussin’s *Cours d’Analyse* and refer him to the remark at the end of section 51 of Vol. I (1923)?

A little naive geometry will clarify the analysis:



PTT' is the tangent at $P(x, y)$ to the curve PQ with equation $y = f(x)$ or $x = g(y)$. Then

$$\Delta x = PR, \quad \Delta y = RQ = R'T'$$

$$df = f'(x) \cdot \Delta x = RT,$$

$$dg = g'(y) \cdot \Delta y = PR'.$$