Brazilian Journal of Physics (2022) 52: 76
https://doi.org/10.1007/s13538-022-01078-8

CORRECTION

Correction to: Some Problems with the Dirac Delta Function: Divergent Series in Physics

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Published online: 14 March 2022

Correction to: Brazilian Journal of Physics (2021) 51:1324–1332
https://doi.org/10.1007/s13538-021-00916-5

In the original article there is an important step missing in Eq. (16). The step is important because students tend to think that the support A of the test function is extended to infinity. In fact, this is not so and what we have is merely a calculation of an integral, viz. Following is the corrected equation:

$$\lim_{\alpha\to\infty}\int_{-A}^{A} dx\frac{\sin(\alpha x)}{x} = \lim_{\alpha\to\infty}\int_{-\alpha A}^{\alpha A} dy\frac{\sin(y)}{y} = \pi\,, \tag{16}$$

where in the last step we made the substitution $\alpha x = y$.

In addition, following is the corrected Ref. 15:

15. S. De Vincenzo, C. Sánchez, Point interactions: boundary conditions or potentials with the Dirac delta function. Can. J. Phys. **88**, 809 (2010).

The original article can be found online at https://doi.org/10.1007/s13538-021-00916-5.

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