

Errata and minor comments to the book by E. M. Stein & R. Shakarchi,
Fourier analysis, an introduction

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These are errata and minor comments to the book

E. M. Stein and R. Shakarchi, *Fourier analysis, an introduction*, Princeton University Press, 2003.

pp. 10, 11 Setting $u(x, t) = u(x, -t)$, as was done in the middle of p.10, forces $g(x) = u_t(x, 0) = 0$. On the other hand, for general choice of g , the formula in the middle of p.11 provides a solution of the wave equation for $t \in \mathbb{R}$ which does not necessarily satisfy $u(x, t) = u(x, -t)$.

p.27, Exercise 9, 1.5 Replace “fifth” by “sixth”.

p.32, end of first paragraph Refer here to the definition of the integral of an integrable function, as given on p.290.

p.33, l.-7 Insert “are” after “that”.

p.56, Exercise 2(e) Insert after “real-valued”: “at all continuity points of $\text{Im } f$ ”.

p.71 Be cautious that “positive-definite” and “inner product” here allow that $(X, X) = 0$ while $X \neq 0$. If this is not allowed then the book speaks about a “strictly positive-definite inner product”.

pp. 74, 75 In Examples 1 and 2 the triangle inequality and the Cauchy-Schwarz inequality are proved for the special inner product introduced in these examples. But both inequalities were already proved on p.73 for general inner products.

p.80, Remark 1, 1.2 Insert “analogue of” before “relation”.

p.94, l.-5 Insert at the end of the formula: “ $+O(N^{-1})$ as $N \rightarrow \infty$ ”.

p.103, formula (1) In second line of (1) put $x(s)y'(s) - y(s)x'(s)$ in brackets.

p.105, 1.10 Replace $k\pi/2$ by $\pi/2 + k\pi$.

p.113, l.-3 Insert after “odd integers” the string “and relatively prime”.

p.163, Exercise 8, 1.1 Insert “if” after “that”.

p.165, second line after (15) Replace “(b)” by “(a)”.

p.263, 1.13 Insert a minus sign before the summation sign.

p.266, Proof of Lemma 3.8 Replace in lines 7 and 9 δ_0 by δ_1 .

p.267, 1.8 add after (3) that this is on p.249.