Introduction to Partial Differential Equations

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Corrections to Third Printing (2020)

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Exercise 2.2.31(b): insert $= 0$ in equation: $u_t + y\,u_x - x\,u_y = 0$.

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Exercise 3.2.14: insert after first sentence:

(See (3.81) for the definition of the function $\operatorname{sign} x$.)

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Line -4: change "second derivative" to "first derivative"

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Line 2 before (3.106): remove square root from "... equal to $\dfrac{1}{2\pi}\displaystyle\int_a^b |\,\varphi(x)\,|^2\,dx$."

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Line 5 after (4.86): change "heat flux out of a plate" to "heat flux into a plate"

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Exercise 4.3.25(b): change $x^2 + y^2 = 1$; to $x^2 + y^2 = 2$;

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Exercise 4.4.12(a): switch t and x in the function: $u_n(t, x) = \dfrac{\cosh n\pi t\ \sin n\pi x}{n}$.

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Line 2 before (5.14): change
"... heat equation (5.14) ..." to "... heat equation (5.7) ...".

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Line 4 after (5.50): reverse the inequality: $\Delta x/\Delta t \geq |\,c_{j,m}\,|$

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At the end of the statement of Theorem B.15, add "; for the triangle equality, the scalar multiples must be nonnegative."

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ebook only: add the following missing reference.

[**68**] Lighthill, M.J., *Introduction to Fourier Analysis and Generalised Functions*, Cambridge University Press, Cambridge, 1970.