Corrections for the book *Second Year Calculus (4th printing)* by David Bressoud

(contributions by Bill Dunbar, Henk Doorn, Peggy Fidelman, Amber Stockham, Jackson Jones, Jeff Legge, Louis Giersch, Rob Golder, Nick Patchett, Nicholas Frazer, Aisha Bien-Aime)

TYPOS

Page	Line	Correction
viii	-2	"bressoud@macalstr.edu" should be "bressoud@macalester.edu".
80	-6	"line segment to the the change" should be "line segment to the change".
94	-7	"$(b_1 - a_1, c_1 - a_1, 0)$" should be "$(b_1 - a_1, b_2 - a_2, 0)$" and "$(b_2 - a_2, c_2 - a_2, 0)$" should be "$(c_1 - a_1, c_2 - a_2, 0)$".
109	-14	"a fundamental k-simplex" should be "a standard k-simplex".
117	-2	x's should be u's ($u = 2t$; change of variable).
149	-9	"parallelpiped" should be"parallelepiped".
196	+7	column vector $(\Delta x, \Delta y, \Delta x)^t$ should be $(\Delta x, \Delta y, \Delta z)^t$.
198	+5	"differential" should be "differentiable".
203	-3	"$4rxy - 4ty^2$" should be "$4rxy - 2ty^2$".
203	-1	"$4x^3y - 4xy^4$" should be "$4x^3y^2 - 2xy^4$".
209	-15	"If s is to small" should be "If s is too small".
244	-9	"at $(\pi, 0, \pi/2)$" should be "at $(\pi, \pi/2, 0)$"? (to satisfy the equation)
255	+3	"In Section 8.7" should be "In Section 9.7".
259	+7	"$Au_1^2 - 2Bu_1u_2 + Cu_2^2$" should be "$Au_1^2 + 2Bu_1u_2 + Cu_2^2$".
259	+8	"$u_2^2(Av^2 - 2Bv + C)$" should be "$u_2^2(Av^2 + 2Bv + C)$".
260	-3	"n linear independent vectors" should be "n linearly independent vectors".
276	+1	"substituions" should be "substitutions".
281	+2	"what is called" should be "which is called".
281	-13	"$d(x^2y)\ dz$" should be "$d(xy^2)\ dz$".
313	+7	"$\{(x, y, z) \mid x^2 + y^2 = 1, z = 0\}$" should be "$\{(x, y, z) \mid x^2 + y^2 \le 1, z = 0\}$".
315	-5	"$\left(\frac{\partial f}{\partial x}\frac{\partial x}{\partial v} - \frac{\partial f}{\partial y}\frac{\partial y}{\partial v} - \frac{\partial f}{\partial z}\frac{\partial z}{\partial v}\right)$" should be "$\left(\frac{\partial f}{\partial x}\frac{\partial x}{\partial v} + \frac{\partial f}{\partial y}\frac{\partial y}{\partial v} + \frac{\partial f}{\partial z}\frac{\partial z}{\partial v}\right)$" and similarly minuses should be pluses in the following two expressions.
322	+4	"$\partial^2 f/\partial x^2 + \partial^2 g/\partial y^2 + \partial^2 h/\partial z^2$" should be "$\partial^2 f/\partial x^2 + \partial^2 f/\partial y^2 + \partial^2 f/\partial z^2$".
358	+16	"mass time acceleration" should be "mass times acceleration".
380	-1	"18. (a) $\pi/24$" should be "18. (a) $-\pi/24$".

MISCALCULATIONS

184	-9	"$h^4u_1^4 + h^2u_2^2$" should be "$(h^4u_1^4 + h^2u_2^2)h$".
184	-8	"$hu_1^2u_2$" should be "$u_1^2u_2$".
184	-7	"0" should be "u_1^2/u_2".
376	+7	"$\partial f/\partial x = 2x\sin(r^{-2}) + r^{-2}\cos(r^{-2})$" should be "$\partial f/\partial x = 2x\sin(r^{-2}) - 2xr^{-2}\cos(r^{-2})$".

QUIBBLES

81	+5	Here and elsewhere in this section, $\vec{a}$ does not denote acceleration.
164	-2	All the x's in this display and in the following one should be in italics.
199	+14	"gravitational constant" should be "acceleration due to gravity on Earth".
218	-4	Here and on the next page, "n sphere" should be "n-ball".
234	+1	The window for figure 9.1 is non-standard, and the "contour lines" need to be defined.
244		Exercises 2b and 2d (as amended) both have $\partial y/\partial x$ undefined. One would suffice.
270	+2	"$f(x)$" should be "$f : \mathbf{R}^n \to \mathbf{R}$", else "$n$ more equations" below has no antecedent.
281	-2	"is a curve" should be "is a curve (or set of curves)".
289		The initial description of "simply connected" in terms of "holes" is confusing, and the later description (homeomorphic to a ball) is non-standard.
293	+9	"$(-4 - 1 + \sqrt{4 + \pi^2}) - (2 + 0 + 1)$" should be "$(-4 + \sqrt{4 + \pi^2} - 1) - (2 + 1 + 0)$".
309	+2	"to Theorem 10.7" should be "to Gauss's theorem, equation (10.7)".
313	-9	The term "integrable form" has not been defined.

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317	+14	The domain of $\vec{F} = -r^{-3}(x, y, z)$ is not "simply connected" in the sense of page 290. (though every closed loop is can be shrunk to a point, and that suffices)
317	-8	The reader may not realize that the condition that the region be "simply connected" carries over from the previous paragraph (else, curl zero doesn't imply no closed integral curves).
350	-7	In equations (11.49), (11.51), and (11.52), change $\ldots = 0$ to $0 = \ldots$.
351	+12	Exercise 9 should specify that (u_1, u_2, u_3) is a unit vector.
365	+8	Edwards, *Advanced Calculus*, is in print by Birkhauser, 1994.
379	+2	We only know that $(\pm\sqrt{1/6}, \pm\sqrt{5/6})$ are critical points, not that they are extrema.