

Errata and Suggestion Sheets
Advanced Calculus, Second Edition, by Patrick Fitzpatrick
 June 4, 2010

Location	Error	Finder	Date
p. 13, ln. -1	for "... number a and b ," write "... numbers a and b ,"	ME	1 Feb 2010
p. 16, 1c	" $\mathbb{Q}\setminus\mathbb{N}$ " should read " $\mathbb{Q}\setminus\mathbb{Z}$."	JD	6 Oct 2005
p. 18, ln. 14	" $1 - T$ " should read " $1 - r$."	RM	7 Oct 2005
pp. 30, 32	To slightly improve clarity, the Linearity Property should come before Theorem 2.13.	RM	10 Oct 2005
p. 40, ln. 2	" $s_4 + \frac{1}{2} = 1 + \frac{3}{2}$ " should read " $s_4 + \frac{1}{2} \geq 1 + \frac{3}{2}$."	JD	17 Oct 2005
p. 54, ln. -9	"sequence $\{-1/n\}$ " should read "sequence $\{-1/n\}$ "	LF	9 Feb 2008
p. 62, ln. 7	"the value 0." should read "zero or negative values."	JF	2 Nov 2005
p. 67, ln. 21	" $1/n$ " should read " $-1/n$."	SH	9 Nov 2005
p. 67, ln. 22	" $2 + 1/n^2$ " should read " $-2 - 1/n^2$."	JD	9 Nov 2005
p. 78, ln. 22	"monotonically increasing" should read "monotone."	JF	9 Nov 2005
p. 81, ln. 23	" \mathbb{D} " should appear " D ."	JD	14 Nov 2005
p. 90, ln. 14	" $\lim_{x \rightarrow 0, x > 0} \frac{f(x) - f(0)}{x - 0} = -1$ " should read $\lim_{x \rightarrow 0, x < 0} \frac{f(x) - f(0)}{x - 0} = -1.$	CB, BH, GV	18 Nov 2005
p. 90, ln. -1 & p. 91, ln. 1	"... $+ x_0^{n-2} + x_0^{n-1}$ " should read $\dots + x x_0^{n-2} + x_0^{n-1}.$	JD	18 Nov 2005
p. 94, # 3	The function value $f(0)$ is defined twice.	JD	14 Nov 2005
p. 99, (4.8)	" $x - x$ " should read " $x - x_0$ " in two denominators.	RM	7 Dec 2005
p. 107, ln. 8	" $x_0 < x_0 + \delta$ " should appear " $x_0 < x < x_0 + \delta$ "	RM	29 Nov 2005
p. 107, ln. -15	for "In Section 9.5," write "In Section 9.6,"	AD	31 Jan 2010
p. 112, ln. 3	" $g^{(n)}(x_0) = n!$ " should appear " $g^{(n)}(x) = n!$ "	TT	21 Jul 2009
p. 112, ln. 14	" $\frac{f^{(n)}(x_n)}{g^{(n)}(x_0)}$ " should appear " $\frac{f^{(n)}(x_n)}{g^{(n)}(x_n)}$ "	KW	30 Nov 2005
p. 120, ln. 15	for "... inverse function \mathbb{R} ." write "... inverse function on \mathbb{R} ."	TT	Jan 2008
p. 142, ln. -1	for "... 1988), a clear..." write "... 1988), is a clear..."	NR	25 Jan 2010
p. 144, ln. -10	the second "(6.19)" should be "(6.20)"	JF	25 Jan 2006
p. 145, ln. 3	for " $[a, b] : \mathbb{R} \rightarrow \mathbb{R}$ " write " $f : [a, b] \rightarrow \mathbb{R}$ "	JF	25 Jan 2006
p. 149, # 4 b.	for " $(b - a)/2$ " write " $(b^2 - a^2)/2$ "	JH	28 Jan 2008
p. 150, ln. -10	for "The f is" write "Then f is"	JF	21 Feb 2006
p. 152, ln. 5	for " $L(f, P_n)$ " write " $U(g, P_n)$ "	BH	25 Jan 2006
p. 152, ln. 12	for " $\dots \leq L(f, P) + U(g, P)$." write " $\dots \leq U(f, P) + U(g, P)$."	JH	3 Feb 2008
p. 153, ln. -1	for " $\dots \leq U(f + g, P_n) \leq L(f, P_n) + U(g, P_n)$." write $\dots \leq U(f + g, P_n) \leq U(f, P_n) + U(g, P_n).$	AS	29 Mar 2009
p. 156, ln. 10-12	for " $[x_{i-1} - x_i]$ " write " $[x_i - x_{i-1}]$ "	CS	28 Jan 2010
p. 160, ln. -2	for "Section 7.4." write "Section 7.3."	IB	7 Feb 2008
p. 162, ln. -8	for " $L(f, P)$ " write " $L(F', P)$ "	IB	7 Feb 2008
p. 162, ln. -8	for " $R(f, P)$ " write " $U(F', P)$ "	IB	7 Feb 2008
p. 164, # 3	for " $\int_a^b f = 4$ " write " $\int_2^6 f = 4$ "	IB	6 Feb 2008
p. 184, Lemma	See instructor for corrected lemma statement and proof.	TT	14 Aug 2009
p. 186, Thm	Proof of theorem still true with corrected lemma statement.	TT	14 Aug 2009
p. 187, ln. -11	for "index $i \geq 1$ " write "index i such that $1 \leq i \leq n$ "	JH	19 Mar 2008
p. 189, # 8	for "Suppose" write "Suppose"	JF	20 Feb 2006

Errata Sheets, cont.

Location	Error	Finder	Date
p. 201, ln. 4	for “ $x = 0$ ” write “ $x_0 = 0$ ”	LF	4 Mar 2008
p. 201, ln. 8	for “ $x = 0$ ” write “ $x_0 = 0$ ”	LF	4 Mar 2008
p. 201, ln. 12	for “ $x = 0$ ” write “ $x_0 = 0$ ”	LF	4 Mar 2008
p. 201, ln. -7	for “ $x = 1$ ” write “ $x_0 = 1$ ”	LF	4 Mar 2008
p. 202, ln. -10	for “strictly increasing...” write “strictly decreasing...”	RM	22 Feb 2006
p. 202, ln. -1	for “at $x = 0$ ” write “at $x_0 = 0$ ”	TT	11 Mar 2008
p. 203, ln. 10	for “ $(x - x_0)^n$ ” write “ $(x - x_0)^{n+1}$ ”	RM	22 Feb 2006
p. 206, ln. -1	for “ $\ln(n + 1) = \ln 1$ ” write “ $\ln(n + 1) - \ln 1$ ”	RM	22 Feb 2006
p. 217, ln. 6	for “number n ” write “number k ”	IB	7 Mar 2008
p. 221, ln. 10	for “about $x = 0$ ” write “about $x_0 = 0$ ”	TT	11 Mar 2008
p. 225, ln. -6	for “ $1 \leq k \leq n$.” write “ $0 \leq k \leq n$.”	TT	26 Feb 2006
p. 233, ln. 2	for “for index” write “for every index”	TT	01 Mar 2006
p. 235, ln. -9	for “ $(0, c)$ ” write “ $(0, b)$ ”	JD	01 Mar 2006
p. 240, ln. -2	for “ $\lim_{n \rightarrow \infty} \left(\frac{a_k}{b_k}\right)$ ” write “ $\lim_{k \rightarrow \infty} \left(\frac{a_k}{b_k}\right)$ ”	TT	01 Mar 2006
p. 241, ln. 12	for “. . . value is 1.” write “. . . value is 1,”	AH	26 Feb 2010
p. 241, Fig. 9.2	for “. . . $\lim_{n \rightarrow \infty} 1^n = 0$.” write “. . . $\lim_{n \rightarrow \infty} 1^n = 1$.”	NC, AD, NR	15 Mar 2010
p. 242, ln. -1	for “. . . natural number k ” write “. . . integer k ”	NR	26 Feb 2010
p. 243, ln. 8	for “. . . number n, \dots ” write “. . . number $n \geq 2, \dots$ ”	TT	11 Mar 2008
p. 243, ln. 9	for “ $f_n(0) = f(2/n) = \dots$ ” write “ $f_n(0) = f_n(2/n) = \dots$ ”	RM	06 Mar 2006
p. 243, ln. 10	for “and $[2/n, 0]$ ” write “and $[2/n, 1]$ ”	RM	06 Mar 2006
p. 243, Fig. 9.4	for “ $(\frac{1}{n}, 1)$ ” write “ $(\frac{1}{n}, n)$ ”	RM	06 Mar 2006
p. 251, ln. 4	for “ $4[b - a]$ ” write “ $[4(b - a)]$ ” (But $[3(b - a)]$ works!)	TT	05 Mar 2010
p. 251, ln. -8	for “ $6[b - a]$ ” write “ $[6(b - a)]$ ” (But $[2(b - a)]$ works!)	TT	05 Mar 2010
p. 257, ln. -4	for “Cauchy on A ” write “Cauchy on A ”	JD	08 Mar 2006
p. 265, Fig. 9.6	left figure: for “ $(l, 2l)$ ” write “ (l, l) ”	AD	15 Mar 2010
p. 265, Fig. 9.6	Two comments: (1) It would be nice to use the <i>same</i> script l as in the surrounding text. (2) It would be nice if the graphs had the same scales for both x - and y -axes.	TT	21 Mar 2010
p. 266, ln. 16	for “ $\sum_{k=1}^{\infty} h_k(x)$ ” write “ $\sum_{k=0}^{\infty} h_k(x)$ ”	TT	10 Mar 2006
p. 279, ln. 6	for “ $\text{dist}(\mathbf{u}, \mathbf{u}')$ and” write “ $\text{dist}(\mathbf{u}, \mathbf{u}') = 0$ and”	RM	29 Mar 2006
p. 302, ln. 7	for “ $A : \mathbb{R} \rightarrow \mathbb{R}$ ” write “ $f : A \rightarrow \mathbb{R}$ ”	JF	15 Apr 2006
p. 324, ln. 8	for “ $f : \mathbb{R} \rightarrow \mathbb{R}$ ” write “ $f : I \rightarrow \mathbb{R}$ ”	TT	23 Apr 2010
p. 355, ln. 4	Is “ \mathbf{e}_i ” defined in the text (other than p. 281, H.W.#2)?	JH	21 Nov 2008
p. 373, ln. 11	for “ $\left(\frac{1}{k}\right)!$ ” write “ $\left(\frac{1}{k!}\right)$ ”	JF	22 May 2006
p. 375, ln. -8	for “ h ” write “ \mathbf{h} ”	JH	21 Nov 2008
p. 391, ln. 8	for “ $\nabla f(\mathbf{x}) = 0$ ” write “ $\nabla f(\mathbf{x}) = \mathbf{0}$ ”	SW	May 2010
p. 474, ln. -10	the word “integrable” comes <i>before</i> it is defined (p. 475)	TT	16 May 2006
p. 479, ln. 14-15	for “in any one of the $\mathbf{P}_k(\mathbf{J})$ ’s” write, perhaps, “in all of the corresponding $\mathbf{P}_k(\mathbf{J})$ ’s”	JH	21 Nov 2008
p. 479, ln. 16	for “ $\sum_{\mathbf{J} \text{ in } \mathbf{P}} U(\dots) - L(\dots)$ ” write “ $\sum_{\mathbf{J} \text{ in } \mathbf{P}} [U(\dots) - L(\dots)]$ ”	JH	21 Nov 2008

Errata Sheets, cont.

Location	Error	Finder	Date
p. 479, ln. 19	for “ $-L(f, \mathbf{P}_k] =$ ” write “ $-L(f, \mathbf{P}_k)] =$ ”	JH	21 Nov 2008
p. 488, ln. 5	for “vol \mathbf{J} ” write “vol \mathbf{J}_i ” (twice)	JH	21 Nov 2008
p. 488, ln. -11	for “For positive numbers a and b , show that the ellipse” write “Show that the set”	TT	26 May 2006
p. 488, ln. -7	for “that the ellipsoid” write “that the set”	TT	26 May 2006
p. 489, ln. 6,7	for “in the interior of \mathbf{J} ” write “in the interior of \mathbf{I} ”	TT	27 May 2010
p. 491, ln. 2	for “ $= \int_{\mathbf{J}} \hat{f},$ ” write “ $= \int_{\mathbf{I}_1} \hat{f},$ ”	TT	26 May 2006
p. 493, ln. -15	for “ $\{(\mathbf{x}, g(\mathbf{x})) \dots$ ” write “ $\{(\mathbf{x}, f(\mathbf{x})) \dots$ ”	TT	26 May 2006
p. 499, ln. 10	for “(19.3)” write “(19.1)”	TT	4 Jun 2010
p. 500, ln. 2	for “of m_i and M_i ” write “of M_i ”	TT	4 Jun 2010