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TABLE ERRATA

636.—*Table of integrals, series, and products*, by I. S. Gradshteyn and I. M. Ryzhik, 5th ed. (A. Jeffrey ed.) (translated from the Russian by Scripta Technica, Inc.), Academic Press, Boston, 1994

Page	*Formula*	
288	**3.145.1**	Replace $(\alpha-\beta)^2$ with $-(\alpha-\beta)^2$ inside the square root.

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637.—*Table of integrals, series, and products*, by I. S. Gradshteyn and I. M. Ryzhik, 5th ed. (A. Jeffrey ed.) (translated from the Russian by Scripta Technica, Inc.), Academic Press, Boston, 1994

1. In **3.145.3** replace $(\alpha-\beta)^2$ with $-(\alpha-\beta)^2$ inside the square root, and replace $\frac{q(\beta-u)}{p(\alpha-u)}$ with $\frac{p(\beta-u)}{q(\alpha-u)}$ inside the square root. Add $p>0$, $q>0$, m and n real. Omit *) and the associated footnote.
2. In **8.111**, pp. 907–908, replace $k^2<1$ with $0\le k\le 1$ (cf. p. *xlv*, second line). The *definition* of each elliptic integral in **8.111.2–5** is understood to be given by the first integral $\int_0^{\varphi}\cdots$. In each case, the second relation, viz. $\cdots=\int_0^{\sin\varphi}\cdots$, holds only if $-\pi/2\le\varphi\le\pi/2$.
3. In connection with this erratum to **8.111**, in **3.145.2**, p. 288, the correct definition of $F(\varphi,k)$ plays a role since φ may be larger than $\pi/2$. This is the case when in **3.145.2** $q(\alpha-u)<p(u-\beta)$, giving $\varphi>\pi/2$. In **3.145.1** this cannot happen, because in that case $q(u-\alpha)\le p(u-\beta)$. Also, requiring in $F(\varphi,k)$ that the modulus k should satisfy $0\le k\le 1$, implies that in **3.145.1** and **3.145.3** the sign of $(\alpha-\beta)^2$ is not correct.

In connection with removing the footnote on p. 288, the following points are of further interest.

1. In the footnote on p. 288 it is said that the results are not valid for $\alpha+\beta=2m$. This is not true. Referring to the simpler cases in **3.152** is correct, however. Observe that $\alpha+\beta=2m$ implies $p=q$.
2. The case $m\neq 0$ is not really different from the case $m=0$, as follows by setting $t=x-m$.
3. For $\alpha+\beta=0$ and $m=0$, **3.145.1** is in agreement with **3.152.5**, and **3.145.2** can be derived from **3.152.4**.

4. Formula **3.145.1** is transformed into **3.145.3**, and vice versa, by the substitutions (for $m = 0$)

$$x \to -x, \quad u \to -u, \quad \alpha \to -\beta, \quad \beta \to -\alpha, \quad p \leftrightarrow q.$$

All errata and remarks hold for the same formulae (on different pages) of the Sixth Edition, 2000, of this book.

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