

Errata for The Feynman Lectures on Physics Volume II New Millennium Edition (submitted 5/16/2021)

The errors in this list appear in *The Feynman Lectures on Physics: New Millennium Edition* and earlier editions; errors validated by Caltech will be corrected in future printings of the *New Millennium Edition* or in future editions.

Errors are listed in the order of their appearance in the book. Each listing consists of the errant text followed by a brief description of the error, followed by corrected text.

last updated: 5/25/2022 1:04 PM

copyright © 2000-2021
Michael A. Gottlieb
Playa Tamarindo, Guanacaste
Costa Rica
mg@feynmanlectures.info

I:viii, after par 4

Note added by Kip Thorne to the *Acknowledgements* section of his Preface.

Note added 13 May, 2022: In addition to Caltech professors who contributed to the making of FLP, a number of graduate students and staff helped with the technical details of its preparation. The Forewords written by Feynman’s coauthors Leighton and Sands acknowledge these helpers, but while Volumes II and III give lists, Volume I includes only a general acknowledgment. After consulting knowledgeable colleagues I have constructed the following, likely incomplete, list of people who, I believe, deserve credit for their help with the technical details of preparing Volume I: *Alan Title, Marylou Clayton, Julie Curcio, Don Groom, James Hartle, Tom Harvey, Fanny Warren, Clyde Zaidins, and Barbara Zimmerman.* (I would welcome suggestions for additions or corrections to this list; please send them to me at Caltech.)

II:3-9, par 1

There are, of course, an infinite number of surfaces which all have the original loops as the boundary.

Incorrect pluralization. (“loops” vs. “loop”)

There are, of course, an infinite number of surfaces which all have the original loop as the boundary.

II:22-10, par 4

If we were to solve the equation for the whole circuit, we would find that the voltage V_n between the two terminals a and b is a linear function of I , which we can write,

$$V_n = A - BI_n, \tag{22.22}$$

Missing subscript in text. (“ I ” vs. “ I_n ”).

If we were to solve the equation for the whole circuit, we would find that the voltage V_n between the two terminals a and b is a linear function of I_n , which we can write,

$$V_n = A - BI_n, \tag{22.22}$$

II:22-11, par 2

If now we consider that z_n is attached to a simple series circuit of a generator and a current, as in Fig. 22-15(b),...

Wrong word (“current” vs. “impedance”), and wrong figure reference (“22-15(b)” vs. “22-16(b)”).

If now we consider that z_n is attached to a simple series circuit of a generator and an impedance, as in Fig. 22-16(b),...

II:32-9, Table 32-2

This table includes several errors. The most significant was a transcription error in the 2nd row, column D; Feynman wrote it on his blackboard “.990” which was incorrectly transcribed as “0.970”. In fact, when this number is calculated it comes out closer to 0.989. Many small errors introduced by rounding were compounded in the calculation, so we have recalculated this table more precisely, as shown below, with changed numbers shown red. The original precision of each number is preserved, with rounding done after all calculations are made.

Fraction of sucrose by weight	Density (g/cm ³)	n at 20°	Moles of sucrose per liter, N ₂ /N ₀	Moles of water per liter, N ₁ /N ₀	$3(n^2-1)/(n^2+2)$	N ₁ α ₁	N ₂ α ₂	N ₀ α ₂
0	0.9982	1.333	0	55.5	0.617	0.617	0	-
0.30	1.1270	1.3811	0.989	43.8	0.697	0.488	0.209	0.211
0.50	1.2296	1.4200	1.798	34.16	0.759	0.380	0.379	0.211
0.85	1.4454	1.5033	3.59	12.05	0.887	0.1340	0.753	0.210
1.00	1.588	1.5577	4.64	0	0.967	0	0.967	0.208
(avg n for sucrose crystal)								
1.5376								
1.5651								
1.5705								
1.557733333								

II:40-8, Fig 40-7

The vertical distance ‘h’ from the top of the water to the hole in the tank (more or less) should be indicated, as shown below.

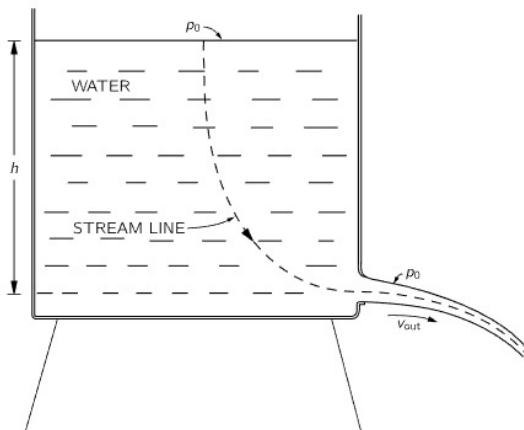


Fig. 40-7. Flow from a tank.

II:40-10, par 3

So the total velocity also increases as $1/r$, and the water goes in along Archimedean spirals.

Wrong kind of spiral: "Archimedean" vs. "equiangular" or "logarithmic". Feynman originally said, *"We have everything going in spirals with the velocity of the order $1/r$, spirals of constant angle, because the tangential and radial velocities are in the same proportion, or Archimedean spirals."*

So the total velocity also increases as $1/r$, and the water goes in along equiangular (or "logarithmic") spirals.