Errata for
The Feynman Lectures on Physics Volume I
New Millennium Edition (6^{th} printing)

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.

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Global changes:

capitalization of proper names

gaussian -> Gaussian
cartesian -> Cartesian
D'Alembertian -> d'Alembertian

spelling corrections

worth while -> worthwhile

I:9-7, par 2

From these we find:

$$r(0) = 0.500 \qquad 1/r^3(0) = 8.00$$
$$a_x = -4.000 \qquad a_y = 0.000$$

For consistency the components of acceleration should be shown at time t=0s:

From these we find:

$$r(0) = 0.500 \qquad 1/r^3(0) = 8.00$$
$$a_x(0) = -4.000 \qquad a_y(0) = 0.000$$

I:9-7, par 2

Now our main calculations begin:

$$\vdots$$
$$r = \sqrt{0.480^2 + 0.163^2} \quad = \quad 0.507$$
$$1/r^3 = 7.677$$
$$\vdots$$

For consistency the radius should be shown at time t=0.1s:

Now our main calculations begin:

$$\vdots$$
$$r(0.1) = \sqrt{0.480^2 + 0.163^2} \quad = \quad 0.507$$
$$1/r^3(0.1) = 7.677$$
$$\vdots$$

I:9-8, Table 9-2, 2nd-to-last row

$$v_y = 0.797.$$

Sign error. See table row for t=2.1s, when the planet is crossing the *x*-axis.

$$v_y = -0.797.$$

I:11-8, Fig 11-7

The vector labeled "Δv" in this figure is not, in fact, Δv, as discussed in the text,

> "How do we get the difference of the velocities? To subtract two vectors, we put the vector across the ends of v_2 and v_1; that is, we draw Δv as the difference of the two vectors, right? *No!* That only works when the tails of the vectors are in the same place!"

The *correct* way to find Δv is subsequently discussed and shown in Fig. 11-8. Therefore, to avoid confusion, the "Δv" in Fig. 11-7 should be labeled "*No!*".

I:11-8, par 3

Suppose, for instance, that a particle is moving on some complicated curve (Fig. 11-7) and that, at a given instant t, it had a certain velocity v_1, but that when we go to another instant t_2 a little later, it has a different velocity v_2.

For consistency here and elsewhere in this chapter (see, for example, Fig. 11-6) t should be t_1.

Suppose, for instance, that a particle is moving on some complicated curve (Fig. 11-7) and that, at a given instant t_1, it had a certain velocity v_1 but that when we go to another instant t_2 a little later, it has a different velocity v_2.

I:14-4, par 3

… all the results would, of course, be the same in our analysis except that the value of the potential energy at $z = 0$ would be $-mg6$.

Constant should precede variables in final term.

… all the results would, of course, be the same in our analysis except that the value of the potential energy at $z = 0$ would be $-6mg$.

I:18-3, par 3

First, we have the angle θ which defines how far the body has gone *around*; this replaces the distance y, which defines how far it has gone *along*. In the same manner, we have a velocity of turning, $\omega = d\theta/dt$, which tells us how much the angle changes in a second, just as $v = ds/dt$ describes how fast a thing moves, or how far it moves in a second.

Typographical error: "the distance *y"* should be "the distance *s*" (as can be seen on Feynman's blackboard).

First, we have the angle θ which defines how far the body has gone *around*; this replaces the distance s, which defines how far it has gone *along*. In the same manner, we have a velocity of turning, $\omega = d\theta/dt$, which tells us how much the angle changes in a second, just as $v = ds/dt$ describes how fast a thing moves, or how far it moves in a second.

I:22-3, par 5

... if *a* is a positive or negative integer, the square of it is greater than 1, ...

Innacurate statement.

... if *a* is a positive or negative integer, the square of it can be greater than 1, ...

I:22-7, par 3

It is easy enough to find out what *e* is: $e = 10^{1/2.3025}$ or $e = 10^{0.434294\ldots}$, an irrational power. Our table of the successive square roots of 10 can be used to compute, not just logarithms, but also 10 to any power, so let us use it to calculate this natural base *e*. For convenience we transform $0.434294\ldots$ into $444.73/1024$.

Numerical inaccuracy: $0.434294\ldots$ should be $0.434310\ldots$ (**2** occurrences), and $10^{1/2.3025}$ should be $10^{1/2.3025\ldots}$ (because otherwise the exponent isn't irrational, as stated).

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I:22-7, par 3

(The only problem is the last one, which is 0.73, and which is not in the table, but we know that if is Δ small enough, the answer is $1+2.3025\Delta$.)

Wrong number (see last line of Table 22-1).

(The only problem is the last one, which is 0.73, and which is not in the table, but we know that if is Δ small enough, the answer is $1+0.0022486\Delta$.)

I:41-7, Fig 41-5

Wrong symbol ('t' vs. 'T'): 4 occurrences. All the "kt"s in the denominators of the exponentials on the right should be kT.