

ERRATA in 1st printing of UNIT R

- Page ii, table RA.1, SI equivalent for energy in terms of speed: change m in numerator to mc^2 .
- Page 3, first line below the formula box: change “equation R1.3 to “equation R1.4”.
- Page 10, third line: change “but principle” to “but in principle”.
- Page 11, lowest sidebar: change “Newtonian to clock” to “Newtonian approach to clock”.
- Page 25, third line of footnote: change “each other (as read” to “each other at $t = 0$ (as read”.
- Page 30, sixth line of caption for figure R2.5a: change “black dots” to “blue dots”.
- Page 32, definition of coordinate time: change “two events either” to “two events is the difference in their times as registered by either”.
- Page 35, last line: change “conventionally to orient” to “conventionally orient”.
- Page 36, first line: change “axes point north and east” to “axes point east and north”.
- Page 42, answers to exercises: change “R2.6” (the number of the second exercise answer) to “R2X.2”.
- Page 61, caption to figure R3.13: change “problem R3B.1” to “problem R3B.3”.
- Page 69, caption to figure R4.2, first and second line: delete “of the motion of”
- Page 70, 7th line below the box: change “reference frame.” to “reference frame).”
- Page 74, example R4.3, 6th line of the solution: change “equation R4.6” to “equation R4.7”.
- Page 83, problem R4M.3, part (d), first line: change “Chris and Dylan” to “Cara and Dave”.
- Page 86, summary for section R5.3, last line: change “ $\gamma = (1 - \beta^2)^{1/2}$ ” to “ $\gamma = (1 - \beta^2)^{-1/2}$ ”.
- Page 89, 2nd paragraph of section R5.2, 2nd line: change “and axes” to “and t' axes”.
- Page 90, equation R5.2, after the second “=”: change “ $t^2 - (\beta t^2)$ ” to “ $t^2 - (\beta t)^2$ ” (that is, move the exponent outside of the parentheses).
- Page 91, figure R5.4b: the x axis should look like the x axis in figure R5.4c (the first and third marks should be eliminated and the second and fourth marks should be labeled “1” and “2” respectively).
- Page 96, 7th line under the exercise: change “principle of relativity the” to “principle of relativity: the”.
- Page 119, paragraph before the exercise, 2nd line: change “R7A.1” to “R6A.1”.
- Page 120, problem R6T.6, last line: change “ L_2 ” to “ L_0 ”.
- Page 122, problem R6R.1, part (a), change “intention of O' above” to “intention of O above”.
- Page 123, problem R6R.4, part (d), change “Check your work for part (b)” to “Check your work for part (c)”.
- Page 129, figure R7.3, change the label “parallel to t' axis” to “parallel to x' axis”.
- Page 150, equation R8.10a: before the final equals sign, change the square root in the denominator so that it does not extend over the dt (the dt should be outside the square root in the denominator).
- Page 154, equation R8.22b: the last term should be $\gamma(p_{1x} + p_{2x} - p_{3x} - p_{4x})$ not $\gamma(p_{1t} + p_{2t} - p_{3t} - p_{4t})$.
- Page 158, problem R8B.5, second line: should be $v_x = \frac{4}{13}$, not $v_x = \frac{4}{15}$.
- Page 166, equation R9.3: change the middle “+” to an “=” (that is, the sum of the first two column vectors should be equal to the sum of the third and fourth column vectors).
- Page 178, problem R9M.12, second line: change “ π^- muon” to “ μ^- muon”.
- Page 183, table RA.1, line for “energy in terms of speed,” last column: change m in the numerator to mc^2 .
- Page 185, equation RB.4, right after the first “=” sign: change $d\mathbf{t}_{AB}$ in the numerator to $d\boldsymbol{\tau}_{AB}$.
- Page 186, first line, after final “>”: change λ_R to λ_E .
- Page 194 (Short Answers to Selected Problems), answer to R2B.3b: change “2.2 g.” to “ $|\vec{p}| = 2.2 \text{ g.}$ ”.
- Page 194, answer to R2B.7(a): change “Yes” to “Outside (assuming that Neptune’s orbit defines the boundary)”.
- Page 194, answer to R3M.9: change “4.41 y” to “8.82 y”.
- Page 194, answer to R4M.7b: change “1.4 m” to “12.3 min”.
- Page 194, answer to R5B7: remove the primes.
- Page 194, answer to R8B.11: change “ $p_t = 37/3 \text{ kg}, p_x = 35/3 \text{ kg}$ ” to “ $p_t = 17/2 \text{ kg}, p_x = 15/2 \text{ kg}$ ”.
- Page 194, answer to R8R.3b: change “47 μm ” to “4.7 m”.
- Page 194, answer to R9B.1: change “20 kg” to “8 kg”.

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