

ERRATA FOR *Everyday Calculus*

NOTE: The corrections below have been incorporated into subsequent printings of the hardcover edition, and they were also incorporated into the paperback edition.

Despite the best efforts of myself and the editors to correct misprints, a few have slipped by. I'm sorry about this. In the list below I have described the errors that I have been made aware of. I will update this list if more are brought to my attention. I hope you enjoy the book despite these small typos.

Page 10: In line 6 there is an “e” missing in the word “differnt.”

Page 11: The source cited lists WBUR’s effective radiative power as 12,000 watts, not 40,000 as written. This corresponds to the energy emitted by $12,000/100 = 120$ light bulbs, not 400. Lastly, equation (1) should be

$$J(r) = \frac{\text{radiated power}}{\text{surface area}} = \frac{12,000}{4\pi r^2} = \frac{3,000}{\pi r^2}.$$

Page 17: In the second paragraph of the section on Galileo, it is written that Galileo invented the telescope. But in fact Hans Lipperhey is the one generally credited with inventing the telescope.

Page 42: In the equation the number -3.66×10^{-10} should be -5.9×10^{-6} . (See also the misprint below on page 131.) With that change, the parenthetical phrase in the last paragraph should say “(5.9 divided by 1 *million*).”

Page 47: In the last paragraph, “*per second*” should be “*per minute*.” This error affects the calculations on page 49. In the second paragraph of page 49, the satellites now move at about 0.0013% of the speed of light (not the 0.078% written). Also, in the paragraph below equation (19), v/c should be 0.000013, the GPS’s onboard clock measurement should be 1.000000000834623, and so the discrepancy is about 0.00000721122 seconds per day, or 1.343 miles per day.

Page 52: In the paragraph below equation (20), “\$30/10 = \$2” should be “\$30/10 = \$3 per employee.”

Page 55: In the third line of the first paragraph, “ $I''(t) < 0$ before t^* and $I''(t) > 0$ after” should say “ $I''(t) > 0$ before t^* and $I''(t) < 0$ after.”

Page 67: In the fourth line after equation (42), “says” should be “tells.”

Page 74: In the paragraph before equation (47), the next to last line ends with “after x 10-cent increases,” but it should say “after x 10-cent decreases.” In addition, in the paragraph after equation (47) all mention of “increase(s)” should be replaced with “decrease(s).”

Page 77: In the paragraph below equation (52), 0.17 should be 0.24. This affects the following paragraph. The last sentence—“But since $g(3.14) \approx 0.21$, the optimal route remains to take the high-speed road all the way to the point B ”—should now read “And since $g(3.14) \approx 0.21$, the optimal route is to take the high-speed road for just over 3 miles and then take a side road to the point B .” Lastly, in the final paragraph of that subsection, $0.22 - 0.17 = 0.05$ should be replaced by $0.24 - 0.21 = 0.03$, and “20 cents” by “12 cents.”

- Page 79:** In the second line (from the top), “ $a \leq c \leq b$ ” should read “ $a < c < b$.”
- Page 102:** Due to a calculation error on page 103 (see below), the “fourth row” mention at the top of the page should read “third row.”
- Page 103:** Figure 7.3 is not the graph of $\theta(x)$. The actual graph looks the same except has its maximum at the point $(7.37, 46.75)$. Moreover, in the second to last paragraph of the page, 9.75 should be 7.37. In the following sentence, “somewhere between the third and fourth rows” should now read “somewhere between the second and third rows.”
- Page 131:** In item 6, the “300” in the formula for $J(x)$ should be a “3,000” and similarly in the formula for $J'(x)$; also the “600” in the formula for $J'(x)$ should be a “6,000”. Moreover, the last equation in item 6 should read

$$J(6) - J(5) \approx J'(5)(6 - 5) = -\frac{6,000}{\pi(8,046.72)^3}(1,609.34) \approx -5.9 \times 10^{-6} \text{ W/m}^2.$$