

Errata for A Logical Introduction to Proof

1. On page vi, on the line preceding the quotes, replace “easily not” with “not easily”.
2. On page 11, Exercise 2. The sentence “Express you answer in English.” should be “Express your answer in English.”
3. On pages 21 to 22, in Example 4 the three occurrences of the word “fiction” should be replaced with the word “poetry.” The italics below identify the correct replacement.

Example 4. Analyze the logical form of the argument below. Identify the premises and the conclusion. Show that the argument is invalid.

Paula and Ernest will not both win the award for best poetry.

Ernest will win either the award for best *poetry* or for best nonfiction.

Paula will not win the award for best poetry.

Therefore, Ernest will win the award for best *poetry*.

Solution. First we shall symbolize the given argument. Let P represent the statement “Paula will win the award for best poetry” and let E represent “Ernest will win the award for best *poetry*.” Ⓢ

4. On page 30, in item 4 of Example 1, replace “ $y = 10$ ” with “ $y = 11$ ”.
5. On page 30, in item 4 of Example 1, replace “ $x = 1$ ” with “ $x = 3$ ”.
6. On page 40, in item (d) of Exercise 3, replace “There a” with “There is a”.
7. On page 48, third line from the bottom, replace “On other hand” with “On the other hand”.
8. In the the lower half of page 52, on the line identified as (2.3) insert the word “is” between “ x ” and “an”.
9. In Table 2.1 on page 58, the first lines of (Universal Modus Ponens) and (Universall Modus Tollens) are missing a right parenthesis “)”.
10. On page 59, the first lines of (Converse Error) and (Inverse Error) are missing a right parenthesis “)”.
11. On page 69, just above Example 1, replace “when $p > 0$ ” with “when $p \geq 0$ ”.
12. On page 72, replace “ $n = 0, 1, 2, 3$ ” in the 4th line from the bottom with “ $n = 1, 2, 3$ ”.
13. On page 88, Exercise 9 is missing a period at the end of its statement.
14. On page 94, in the last proof diagram replace \mathbb{N} with \mathbb{Z} .
15. On page 105, on the bottom of the page, the formula $n^2 + n + 1 + 2n + 2$ should be $n^2 + n + 2 + 2n + 2$.
16. On page 106, on the top of the page, the formula $(n^2 + n + 1) + 2(n + 1)$ should be $(n^2 + n + 2) + 2(n + 1)$.
17. On page 125, the last equation in the first line, $a_4 = 2a_3 + 13$, should be $a_4 = 2a_3 + 1$.
18. On page 141, in the first line, j , should be k .
19. On page 156, in Exercise 1 delete “If $A \subseteq B$, then”.
20. On page 163, in Exercises 9(a) and 9(b), replace “indexed set I ” with “index set I ”.
21. On page 164, replace “Russel’s paradox” with “Russell’s paradox”.
22. On page 183, in the line above Theorem 6.2.14 use “ $x^5 + x^3 = y$ ” for “ $x^5 + x^2 = y$ ”.
23. On page 196, on the last line of the second paragraph replace “set countably” with “set is countably”.
24. On page 199, on the last line of the footnote replace “ $f_i: A_i \rightarrow \mathbb{N}$ ” with “ $f: A_i \rightarrow \mathbb{N}$ ”.
25. On page 207, in Exercise 30 replace “ $g(a) = \{b, c, g\}$ ” with “ $g(a) = \{b, c, d\}$ ”.
26. On page 234, in Example 3 replace “are a minimal” with “are minimal”.
27. On page 237, in Exercises 11, 12, 13 replace “ $h(h)$ ” with “ $h(y)$ ”.
28. On page 266, in Example 10 replace $\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 5 & 2 & 6 & 3 & 4 & 1 \end{pmatrix}$ with $\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 \\ 3 & 2 & 4 & 5 & 6 & 1 \end{pmatrix}$.
29. On page 268, in last sentence of first paragraph, replace ‘ $\sigma = \tau_2 \tau_2$ ’ with ‘ $\sigma = \tau_1 \tau_2$ ’.
30. On page 269, in the first two lines of the paragraph after Definition 8.4.13, replace ‘192’ with ‘48’.

Thank you Professor George H. K. Wang (George Mason University) for contributing to this errata sheet.

Dear Reader, please notify me about other errors that you may find, at cunnindw@buffalostate.edu