

Errata for Chapter 1

1. On page 1, in line -7 , replace the word “usually” with the word “sometimes”.
2. On page 3, after the last sentence above Problem 1, add the sentence:

The set $\{x \in A : P(x)\}$ can also be written as $\{x : x \in A \text{ and } P(x)\}$.

3. On page 3, just prior to Definition 1.1.2, add the paragraph:

We will occasionally identify a set by the method of *comprehension*. In this method one defines a set to be the collection of all the elements x that satisfy a property $P(x)$. The notation $\{x : P(x)\}$ will be used to identify this set.

4. On page 5, at the end of Section 1.1 (prior to the exercises), add the paragraph:

We employed the method of comprehension to identify the sets $\mathcal{P}(A)$ and $A \cup B$; however, one must use this method with caution. For certain (bizarre) properties $P(x)$, the collection $\{x : P(x)\}$ is not a set (see Russell’s Paradox on page 20). On the other hand, Theorem 2.1.3 presents a condition under which one can correctly produce a set by the method of comprehension.

5. On page 6, in the first three numbered items, the indefinite article “a” needs to be inserted as follows:
 1. $P \wedge Q$ (means “ P and Q ” and is called a *conjunction*).
 2. $P \vee Q$ (means “ P or Q ” and is called a *disjunction*).
 3. $\neg P$ (means “not P ” and is called a *negation*).

6. On page 23, in Exercise 6 the variable x appearing in the formula

$$\forall z \forall y ((\varphi(x) \wedge \varphi(y)) \rightarrow z = y)$$

should be replaced with the variable z as follows:

$$\forall z \forall y ((\varphi(z) \wedge \varphi(y)) \rightarrow z = y).$$

Errata for Chapter 2

1. On page 35, in the third line of the last paragraph before Exercises 2.1, the expression

Clearly, the set $X = \{1, 3\}$ is subset of $A \cup B, \dots$

is missing the indefinite article a which needs to be inserted as follows:

Clearly, the set $X = \{1, 3\}$ is a subset of $A \cup B, \dots$

Errata for Chapter 5

1. On page 122, in the first line, the expression “Let F_A be set” should be “Let F_A be the set”.

Errata for Chapter 9

1. On page 213, in Theorem 9.1.11 the expression “ $\aleph_\alpha \in \aleph_\alpha$ ” should be “ $\aleph_\alpha \in \aleph_\beta$ ”.

Thank you Professor Kevin Easley (Truman State University) for contributing to this errata sheet.

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