

The Top 20 Language Mechanics and Number Expression Rules Used in Technical Writing

1. Use a comma before a coordinating conjunction that joins two independent clauses. Hint: coordinating conjunctions are FANBOYS (for, and, nor, but, or, yet, so).
 - *We spent several hours discussing solutions to the problem, **but** we failed to decide on a course of action.*

If a sentence contains an independent clause followed by a dependent clause, no comma is needed.

- *The committee plans to collect the data by March **but** will not have the report completed until June.*
2. Use a comma after introductory dependent clauses, phrases, or words that come before the main independent clause.
 - ***On the basis of his recommendations**, we decided to expand our operations.*
 - ***Arriving late to class**, Olivia had trouble finding a seat.*
 - ***To find a seat in class**, I recommend you arrive 5 min early.*
 3. Sentence fragments occur when subordinate (dependent) clauses are written as complete sentences. Connect subordinate (dependent) clauses to independent clauses to form a complete sentence.
 - Incorrect: *The controller provided a cost estimate. **Based on 2010 data.***
 - Correct: *The controller provided a cost estimate that was based on 2010 data.*

4. Use commas between words, phrases, or clauses appearing in a list of three or more including a comma before the coordinating conjunction. The use of the Oxford/Serial comma **is** used in technical writing.
 - *Four popular Internet search sites are **Google, Bing, Yahoo, and Ask.***
5. Use commas to set off words, phrases, and clauses that are non-essential to the meaning and interrupt the natural flow of the sentence. These elements may appear at the beginning, middle, or end of the sentence.
 - ***In fact**, it takes 250 years for Pluto to orbit the Sun.*
 - *You should, **nevertheless**, continue to master grammar rules.*

Modifying words essential to the meaning of the sentence are not set off with commas. If the modifying words are left out and the meaning of the sentence is changed, the wording is considered essential and should not be set off with commas.

NOTE: Writers of technical information use *that* for restrictive (essential) clauses (no comma used) and *which* for non-restrictive (non-essential) clauses (comma required).

- *The book **that you ordered yesterday** is no longer available for purchase. (essential)*
 - *Please use the credit card in my wallet, **which is on the dresser.** (non-essential)*
6. An appositive is a noun or noun phrase placed before or after another noun to rename or describe that noun. Appositives essential to the meaning of the sentence should not be set off with commas; appositives non-essential to the meaning of the sentence should be set off with commas.
 - *My friend **John** just ran his first marathon. (essential)*
 - *Pahoehoe lava, **a textured formation**, occurs on the Kilauea volcano in Hawaii. (non-essential)*
 7. A run-on sentence occurs when two independent clauses are placed together without a conjunction or punctuation mark between the clauses. A comma splice occurs when two independent clauses are separated with a comma. Punctuate both run-on sentences and comma splices by adding a semicolon **or** a comma and conjunction between the independent clauses.
 - Incorrect: *The company performed well last quarter its stock rose several points. (run-on sentence)*
 - Incorrect: *The company performed well last quarter, its stock rose several points. (comma splice)*
 - Correct: *The company performed well last **quarter; its** stock rose several points.*
 - Correct: *The company performed well last **quarter, so** its stock rose several points.*

8. Use a comma between related adjectives that precede a noun.
 - *His **direct, practical** approach has created a high degree of respect.*

9. When a transitional word (however, furthermore, consequently, therefore, moreover, etc.) joins two independent clauses, place a semicolon after the first independent clause and a comma after the transitional word **or** omit the transitional word and comma and place a semicolon between the two independent clauses.
 - *Departments will have budget increases; **therefore**, staff will receive all equipment requested. **OR***
 - *Departments will have budget **increases**; **staff** members will receive all equipment requested.*

10. Use commas to set off geographic names, dates (except month/day and month/year), and titles in names. Avoid abbreviating names of states in sentences.
 - ***Birmingham, Alabama**, was the first manufacturing city in the world.*
 - ***July 22, 1959**, was a momentous day in his life.*
 - *The average temperatures for **July 1998** are the highest on record.*
 - *The keynote speaker is **Rachel B. Lake, PE**.*

11. Achieve parallel structure by using the same pattern of words to improve the flow of the sentence and to show that two or more ideas (words, phrases, or clauses) have the same level of importance.
 - Incorrect: *In his free time, Fred likes to **read, hike, and watching** birds.*
 - Correct: *In his free time, Fred likes to **read, hike, and watch** birds.*
 - Correct: *In his free time, Fred likes **reading, hiking, and watching** birds.*

12. Add 's to the singular form of a noun to make it possessive; add s' to the plural form of a noun to make it possessive. If a possessive noun is spelled with an s at the end, add an 's. A modern approach is to add s' to possessive nouns ending in s. Both applications of this rule are acceptable.
 - *The **boy's** hat is green.*
 - *The three **girls'** sweaters are identical.*
 - ***Moses's** hat is green. **OR Moses'** hat is green.*

Do not include an apostrophe when indicating a plural on numbers, symbols, and letters.

 - *The **1960s** were a time of social unrest.*
 - *The printed page has too many **&s** on it.*
 - *There are eight **Cs** currently discussed in ENGR 3080.*

13. Avoid misplaced or dangling modifiers by placing the phrase or clause near the word it modifies.
 - Incorrect: *He bought a horse for his **sister named Prince**.*
 - Correct: *He bought a **horse named Prince** for his sister.*

14. Unclear pronoun reference occurs when a pronoun (*it, this, that, them, or they*) refers to more than one antecedent (noun) in the sentence. Unless the reference is obvious, the recommendation is to re-state the noun being referred to.
 - Incorrect: *Transmitting radio signals by satellite is a way of overcoming the problem of scarce airwaves and limiting how **they** are used.*
 - Correct: *Transmitting radio signals by satellite is a way of overcoming the problem of scarce airwaves and limiting how **these signals** are used.*

15. Avoid mistakes that occur when words sound alike but have different meanings or spelling (homophones). Examples include *than/then, our/are, to/two/too, their/they're/there, principle/principal*.
 - *The weather conditions will **affect** the number of people who ski this year. (**Affect** means to influence something and is usually a verb.)*
 - *What **effect** did the loss have on the team? (**Effect** indicates a result and is usually a noun.)*

16. Use a colon after an independent clause when introducing a list.
- *We covered three fundamentals in our technical writing class: grammar, style, and voice.*
- NOTE: If the clause following the colon is a complete sentence, it begins with a capital letter.
- *Researchers have agreed on the outcome: Informed participants are more likely to participate in medical trials.*
17. Place periods and commas inside quotation marks.
- *He said, "I may forget your name, but I never forget a **face**."*
- If the quote is phrased as a question, place the question mark inside the quotation marks.
- *She asked her classmate, "May I borrow a pencil?"*
- NOTE: Quotation marks are not used to emphasize specific words in a sentence; italics are appropriate.
- Why am I *always* the last to know?
18. Subjects and verbs must agree in number. If the subject is singular (represents one person or thing), the verb should be singular. If the subject is plural (represents more than one person or thing), the verb should be plural.
- *In the past three months, a new **line** of inexpensive computers **has** been released.*
 - *In the past three months, two new **lines** of inexpensive computers **have been** released.*
19. Avoid the use of unnecessary commas. Many writers incorrectly insert commas to signify a pause in a sentence or to organize excessively long sentences. Before using a comma, know the applicable rule.
20. The following number-related rules comply to generally accepted technical writing standards. As rules may differ based on discipline, consult a discipline-specific style manual for number and unit expression.

A. Number Expression

Spell out single-digit numbers zero through nine, not including measured quantities. Numbers 10 or greater are expressed numerically. For numbers greater than 999,999, use the initial digit(s) and write out millions, billions, or trillions.

- *The collision damaged **seven** vehicles and injured **four** passengers.*
- *The project will take between **12 and 14** months to finish.*
- *Flying to Kepler-452b would take **28** million years.*

If a sentence contains related numbers that are both less than and greater than 10, express all numerically. Exceptions: time, dates, page numbers, percentages, money, and proportions (see 20C).

- *The farmer bought **4** chickens, **12** pigs, and **9** goats.*

Approximate numbers follow the same rules as exact numbers.

- ***About 50,000** discrete events were recorded.*
- ***Approximately 8 samples in 20** had to be discarded.*

Avoid starting sentences with numbers; either spell out the number or revise the sentence.

- Incorrect: **25 engineers** were involved in the project.
- Correct: **Twenty-five engineers** were involved in the project. **OR** The project involved **25 engineers**.

B. Units and Abbreviations

If number is followed by a unit of measurement, abbreviate the unit. Leave one space between the number and the unit.

NOTE: A period is included after the abbreviation for *inch* (*in.*) to differentiate from *in* used as a preposition.

- *The heat transfer surface of the cylinder was covered with **25 mm** of insulation.*
- *Salt Lake City received **9.3 in.** of snow on January 8, 2019.*

To prevent misreading, do not abbreviate the following units of time even when they are accompanied by numeric values: day, week, month, year. All other units of time are abbreviated: hour = hr or h; minute = min; second = s or sec; millisecond = ms or msec; nanosecond = ns or nsec

- *The gestation period for an African bush elephant is **22 months**.*
- *Students are allowed **50 min** on the exam.*

Symbols for units are written in the singular form.

- *There are 1000 **mm** in 1 L. **NOT** There are 1000 **mms** in 1 L.*

If the unit of measurement is named for a person, the unit is capitalized.

- *The strength of an average solar sunspot is equal to **0.3 T**.*
- *The technician heated the sample to **80 °C***

NOTE: In a non-numeric context, spell out the unit and use a lower-case first letter (even if the unit is named for a person).

- *A **tesla** is a unit of measurement of the strength of a magnetic field.*

Write secondary/converted units in parentheses after primary units.

- *Please install a 2-in. (**5.08-cm**) rod.*

NOTE: Use a hyphen between numbers and units used to modify a noun.

- *Civil engineering students are invited to a **3-day** conference.*

C. Measurements

Numerals, even if they are less than 10, are used to represent specific values that signify time, date, age, distance, scores and points on a scale, and sums of money.

- *6 a.m. or 3:30 p.m.*
- *Factor of 2*
- *Chapter 2, Vol. 3, No. 7, Figure 4, Page 19*
- *7 ms, 3 min, 7 hr, 4 months, 6 years, 5 days*
- *50%*
- *\$0.26 per unit, \$1.1 million, \$45 (for exact dollar amounts, omit the decimal point and trailing zeros)*

NOTE: Omit the space between the numeral and the unit for % and \$

D. Fractions and Decimals

Isolated fractions in the text should be spelled out unless the fractions are long and complicated.

- *The formula called for **one-half** of the amount.*
- *Only **18/25** of the mixture was used.*

When the precise value of a fraction is required, use the decimal form.

- *The technician added **0.5 L** to the mixture.*

For numbers less than 1.0, insert a zero to the left of the decimal point.

- *0.47 **not** .47*

E. Adjacent Numbers

With two adjacent numbers, retain the number that goes with the unit and spell out the other number.

- *The technician ordered **twelve 26-in.** pieces.*

If the first number is complicated, spell out the number that goes with the unit.

- *The technician ordered **4,256 twenty-six-in.** pieces.*