



NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS

Style GUIDE





Style Guide

Table of Contents

- Style Guides, Usage Guides, and Dictionaries** 3
- NCTM-Specific Terminology** 3
 - Governance 4
 - Ongoing Programs and Events 5
 - Website and Online Presence 6
 - Mission Statement and Official Positions 6
 - Other Terminology 7
- Electronic Terms** 7
- Education Terms** 8
 - General Terms 8
 - Mathematics Education 13
 - Materials in the Mathematics Classroom 15
- Guidelines for Style and Usage** 16
 - Abbreviations 16
 - Active Voice 17
 - Campuses of Universities 18
 - Capitalization 18
 - Contractions 19
 - Dates 19
 - Ellipsis Points 19
 - Hyphens and Related Matters 20
 - Closed-up Words 20
 - Hyphenated Words 20
 - Open Phrases 21
 - Lists 21
 - Horizontal, Run-in Lists 21
 - Vertical Lists 21
 - Mathematics and Symbols 22
 - Numbers 23
 - Parallelism 24
 - Parentheses 24
 - Possessives 25
 - Punctuation and Grammar 25
 - Quotation Marks 26
 - References and Citations 27
 - Sexism and Racism 27
 - Software Programs 27
 - Subject-Verb Agreement 28
 - Substitutes for Overused Words and Phrases 28
 - Tables and Figures 29
 - Telephone Numbers 29



Titles of Games	29
Titles of Problems	29
Titles of Works	30
Word Usage and Terminology	30
Appendix A: Style for References	38
Appendix B: Chicago Style vs. APA Style at a Glance	41
Appendix C: Trademarked Products	44



Style Guides, Usage Guides, and Dictionaries

NCTM recommends and uses the following sources as style guides and authorities in writing and editing for NCTM:

- The Chicago Manual of Style, 17th edition
- Publication Manual of the American Psychological Association, 7th ed., 2019
- The Associated Press Stylebook, 2019
- Merriam-Webster Collegiate Dictionary, 11th edition

Mathematics Teacher: Learning and Teaching PK-12 (MTLT) and most NCTM books follow Chicago style. The *Journal for Research in Mathematics Education (JRME)* and *Mathematics Teacher Educator (MTE)* follow APA style (as do some books that present or analyze research results). News releases and *Summing Up* follow a combination of AP and Chicago styles. However, use serial commas, and italicize book and journal names. Allowances should be made for appropriate differences in language, tone, and style for the different formats and audiences. Although no less grammatically correct, marketing copy may adopt a more informal and conversational tone when deemed appropriate or necessary for a project or initiative. This may be accomplished by the use of such things as contractions and ellipses as well as varying sentence lengths to assist in conveying both message and tone and helping remain within strict word or character limits.

All NCTM publications (including news releases) use the Oxford (serial) comma.

NCTM-Specific Terminology

In general, NCTM recommends capitalizing terms that refer specifically to NCTM or its organizational structure, programs, events, and publications, for the purpose of highlighting NCTM in all Council communications.

Do not use *the* before *NCTM* unless the abbreviation is followed by another noun.

- Incorrect:* In general, the NCTM recommends capitalizing terms that refer specifically to the Council.
- Correct:* In general, NCTM recommends capitalizing terms that refer specifically to the Council.
- But:* The NCTM Board of Directors will meet in Indianapolis this month.
- Or:* NCTM's Board of Directors will meet in Indianapolis this month.



Governance

Council: Capitalize in all instances referring to NCTM to distinguish the National Council of Teachers of Mathematics from other councils.

Board of Directors; Board: Capitalize in all cases referring to NCTM's Board of Directors to set it apart from other boards: "the NCTM Board of Directors"; "the Board of Directors"; "the Board."

Affiliate; Affiliates: Capitalize when referring to the college and university groups officially affiliated with NCTM. Such groups are called simply "Affiliates" rather than "affiliated groups." NCTM has Partner Affiliates, Associate Affiliates, and Student Affiliates.

Delegate Assembly: Always capitalize; refers to the regularly scheduled gatherings of the officers and representatives of NCTM's Affiliates at the annual meetings for the purpose of sharing common concerns and proposing resolutions for action by the Board of Directors.

President; President-Elect; Past President; Member of the Board; Committee Chair: NCTM style regarding titles of NCTM officers essentially follows Chicago style. That is, capitalize official NCTM titles (such as *president*, *president-elect*, and *committee chair*) when they appear *before* specific officeholders' names.

Examples: NCTM President George Prime; President-Elect Angela Avogadro; President Archie Archimedes; PC Chair Holly Hilbert.

Use lowercase for official NCTM titles when they appear *after* current or former officeholders' names.

Examples: José Racine served as NCTM president for two years; Benny Riemann is a member of NCTM's Board of Directors; Tabitha Gauss is the chair of the NCTM Publishing Committee.

Use lowercase for NCTM designations that the Council does not consider as official titles. Such designations are convenient to use at NCTM, but do not have the status of official titles.

Past president is an official title only when it designates an outgoing NCTM president in the first year after his or her term as NCTM president. It is simply a descriptive label when it designates all other former NCTM presidents. In the latter case, it is lowercase both before and after the name: "NCTM past president Lois Dolciani"; "Lois Dolciani, past president of NCTM."

NCTM does not use *Board member* as an official title for members of the NCTM Board of Directors, so *member* is not capped before a name: "Board member Andy Fibonacci." NCTM does not generally use the term *Director* for a Board member.

Lowercase NCTM official titles when they appear on their own, unattached to anyone's name: "NCTM elects a new president every two years and several new Board members each year."

Inserting a modifier (such as *newly elected*) in front of an official title that appears before a name usually causes the title to lose its official status ("newly elected NCTM president Desmond Fermat").



Examples of these guidelines in use:

- During her year as NCTM president-elect, Angela Avogadro closely shadowed Felix Fraction, the current NCTM president.
- During the past year, NCTM President-Elect Angela Avogadro closely shadowed NCTM President Felix Fraction.
- NCTM President Mary Dedekind and Board member Andy Fibonacci testified on STEM education before the House Committee on Education and Labor.

Committees and Panels: Use initial caps with the names of specific committees established by the NCTM Board of Directors—for example, Publications Committee. In subsequent references, use either “the committee” (lowercase) or the committee’s initials (in all caps). Show the initials in parentheses after the first appearance of the committee name in full before using the initials in subsequent references: “the Publications Committee (PC). . . , The PC. . . .”

Likewise, use initial caps with the names of editorial panels serving the NCTM Board. Italicize names of specific publications in the panels’ names: “*Mathematics Teacher Educator* Editorial Panel; *Journal for Research in Mathematics Education*” (after the first reference: “*MTE* Editorial Panel,” “*JRME* Editorial Panel,” “the Editorial Panel,” “the panel”). Note that *MTLT* has an editorial board not a panel, an editor-in-chief, and associate editors.

Chair is preferred to chairman, chairwoman, or chairperson.

Ongoing Programs and Events

NCTM Annual Meeting & Exposition: Capitalize designations of particular NCTM annual meetings.

Examples: 2019 Annual Meeting in San Diego; 2019 Annual Meeting & Exposition in San Diego

Lowercase *annual meeting* in instances that do not refer to a specific meeting. The same guidelines apply in the case of NCTM regional meetings and expositions.

Themes of meetings and conferences should appear in roman type, in quotation marks.

Example: The theme of NCTM’s 2019 Annual Meeting in San Diego is “Empowering the Mathematics Community.”

NCTM Regional Meeting & Exposition: See *NCTM Annual Meeting & Exposition* above. The same guidelines apply.

Mathematics Education Trust (MET): Through gifts and endowments, MET offers financial support in the form of scholarships and other awards to qualified preservice and in-service teachers of mathematics. Capitalize the names of particular grants and awards.

E-Seminars Anytime: Online professional development sessions offered by NCTM. The capital *E* is an exception to NCTM’s general treatment of *e-* to mean *electronic*.



Illuminations: NCTM's extensive Illuminations website features Standards-based resources to improve the teaching and learning of mathematics.

Website and Online Presence

www.nctm.org: NCTM's Web address should include "www" but in most instances does not need "http://."

Illuminations website; <http://illuminations.nctm.org>: Offers materials to illuminate the vision for school mathematics set out in *Principles and Standards for School Mathematics*, *Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics*, and *Focus in High School Mathematics: Reasoning and Sense Making*.

more4u; www.nctm.org/more4u: Offers supplemental materials (activity pages, videos, etc.) for NCTM books, available to purchasers who go to the site and enter an access code for a particular title. Written in text as "more4U."

Headquarters; Headquarters office: Capitalize *Headquarters* to designate NCTM's Headquarters.

Headquarters staff: Collective noun; treat as singular.

Intranet: Capitalize to indicate NCTM's network to disseminate information in-house to staff.

Mission Statement and Official Positions

NCTM's Mission Statement is the official statement of the Council's purpose, crafted and periodically reviewed and updated by the Board.

NCTM's Mission Statement appears on the copyright page of all NCTM books and on the mast-head of all NCTM journals. The current wording of the statement, as updated in 2018, follows:

The National Council of Teachers of Mathematics advocates for high-quality mathematics teaching and learning for each and every student.

Use initial caps in all references to NCTM's Mission Statement.

The Board also regularly considers and develops official positions to support teachers in securing resources to provide high-quality mathematics education for all students.

In addition, the Board occasionally determines the need for book-length presentations of the Council's official positions in certain areas of mathematics education, usually related to NCTM's Standards. The Board appoints writing groups and charges them with producing these signature publications.

NCTM position statements are posted on the NCTM website. Each official position of the Council appears in a brief form, titled *NCTM Position*, and in a complete form, titled *NCTM Position Statement*.



Show the name of a particular position statement in quotation marks, with initial caps; identify it as an NCTM Position Statement; and give the date.

Example "Access and Equity in Mathematics Education," NCTM Position Statement, April 2014.

Use lowercase when referring to NCTM position statements in general.

Other Terminology

Standard; Standards: Capitalize the S in a reference to an individual Standard or a group of Standards articulated by NCTM for mathematics learning. Use a lowercase s in a reference to a standard or standards established by other organizations.

NCTM Standards publications; Standards publications: Use one of these phrases, with the capitalizations shown, to refer to all or several of NCTM's Standards-related publications. Do not italicize *Standards* and use it as a catchall shortened title for NCTM's Standards publications, as recommended previously.

Electronic Terms

The following list shows common terms associated with electronic technology and indicates how to treat them in NCTM material.

Calculator and computer commands: Designers will show in a different font (e.g., a sans serif if the body text is a serif font), will use small caps, and will use an initial cap. Copyeditors should not style but should make a note to the designer. That is, use body text, no caps, no bold, but indicate in some way that designer should apply the style.

Example: Press **ENTER**.

e- or e: Lowercase combining form meaning *electronic*. With common nouns, a hyphen follows e to ensure readability: *e-book, e-commerce, e-zine, e-publication* (sometimes shortened to *e-pub*). With most proper nouns, including many product names, e is closed up to a capital letter, as in NCTM's eBooks and eChapters. Note that as an exception to the lowercase e, NCTM's professional development series E-Seminars Anytime uses a capital E. In titles of more than one word, e is followed by a hyphen instead of being closed up. At the beginning of a sentence, e is uppercase only when it is followed by a hyphen. An exception to this rule is the term "email."

e-Standards: Refers to the electronic version of *Principles and Standards for School Mathematics*, the Council's most fully developed formulation of NCTM's Standards.

e-Examples: The e-Standards are supported by a group of e-Examples that use interactive applets to illustrate learning and teaching aligned with the Standards.

internet is now lowercase; do not refer to it as "the Net."



web, website

World Wide Web: Web addresses should be checked for accuracy in copyediting and rechecked in proofing.

Education Terms

The following list has three sections. The first is a **general section**, showing how to treat terms that are used across disciplines in education. The second gives guidance on terms that are particular to **mathematics education**. The third shows how to treat a sampling of terms for specific equipment or materials that are used in **mathematics classrooms**.

NCTM journals and books show the symbol ® or the symbol ™ after the first mention of a product that is, respectively, a registered trademark or an unregistered trademark. Avoid use of brand names as much as possible. If using a brand name, use the registered or unregistered trademark symbol only at the first mention of the product. Subsequent branded product mentions do not use the trademark symbols. Appendix I lists such products and identifies the appropriate symbol for each entry in the list.

General Terms

achievement gap

activity sheet: Page supplied for students' use in working on a task; use instead of *worksheet*.

ACT: Formerly known as *American College Testing*. A national standardized assessment used in college admissions, developed as a competitor for the SAT and sometimes taken in place of or along with it. Pronounced as initials and identified only by them.

Advanced Placement (AP): Capitalize when spelled out; proprietary name of an internationally recognized program. Capitalize names of specific Advanced Placement courses: *Advanced Placement Calculus*; *AP Calculus*; *AP Calculus exam*. Similar treatment for International Baccalaureate (IB).

assessment: More commonly used than *evaluation* to denote a measurement of students' learning. Assessments are of different types, including *formative assessment*, *summative assessment*, and *diagnostic interview*.

benchmark (n. and v.); **benchmarked** (adj.)

childcare (n. and adj.)

children with challenges: All children face challenges. Do not use as a description of children who struggle to learn mathematics; use *students with special needs* or *students with disabilities*.

Common Core State Standards (CCSS); Common Core Standards; Common Core State



Standards for Mathematics (CCSSM): K-12 standards for college and career readiness, released in 2010 by the state-led Common Core State Standards Initiative, spearheaded by the National Governors Association Center for Best Practices and the Council of Chief State School Officers. Developed to bring coherence to curricula across the United States in the teaching of mathematics (CCSSM) and English language arts.

Use roman type in regular text when specifying the standards themselves, in total or in part, rather than the publication, but italicize in all citations, to indicate the publication. The full bibliographical citation for CCSS and CCSSM follows:

National Governors Association Center for Best Practices (NGA Center) and Council of Chief State School Officers (CCSSO). 2010. *Common Core State Standards for Mathematics*. Washington, DC: NGA Center and CCSSO. <http://www.corestandards.org>.

CCSSM includes Standards for Mathematical Practice and Standards for Mathematical Content, which address core mathematics processes and content, respectively. CCSSM's Standards for Mathematical Practice (referred to as "SMP 1," etc.) are closely related to NCTM's Process Standards (*Principles and Standards for School Mathematics*) and Reasoning Habits (*Focus in High School Mathematics: Reasoning and Sense Making*).

Show the names of these two classes of standards within CCSSM with initial caps.

coursework

critical thinking; critical thinking skills: No hyphen; do not substitute synonyms for *critical*, which has particular meaning in this phrase.

curriculum (sing.); **curricula** (pl.; not *curriculums*); **curricular** (adj.)

data: Always plural. If a singular noun is desirable, use *information*.

data-driven (adj.)

decision maker (n.); **decision-making** (n. and adj.) But *policymaker*; *policymaking* (n. and adj.)

differentiated instruction: Specific, individualized instruction.

elementary school (n. and adj.): No hyphen in any position. Today, *elementary school* usually designates kindergarten-grade 5; previously, it commonly meant education through grade 6. Sometimes the adjective phrase *elementary school* is clearer in context than the single word *elementary*. For example, the phrase "elementary school learning" denotes a specific level of education in a neutral way, whereas "elementary learning" may be interpreted as a basic level of achievement, possibly in a disparaging or derogatory sense.

English as a foreign language (EFL)

English as a second language (ESL)



English for speakers of other languages (ESOL)

English language learner (ELL); English language learners (ELLs); English learners (ELs)

faculty: Collective noun; treat as singular; same for *staff*

field test (n.); **field-tested** (adj.); **field-test** (v.)

formative assessment: Open in any position.

general education: Use instead of *regular education* in differentiating from *special education*.

gifted; gifted and talented: Use only as adjectives (*gifted students; gifted and talented education*); no hyphens in *gifted and talented*. Do not use as nouns (*the gifted; education for the gifted and talented*). Gifted and talented education is sometimes referred to by the initialism *GATE* or as *GT education*. See also learning disabled gifted and talented (LDGT) students.

grade; grade level (n.); **grade-level** (adj.): The school grades are conventionally the *numbered* levels 1-12; kindergarten (K) and prekindergarten (PK) are not, strictly speaking, *grades*. Use "PK-12" rather than the phrase "grades PK-12." To denote a particular grade level, use a cardinal number after *grade* (e.g., grade 2) or an ordinal number (spelled out) before *grade* (e.g., second grade). Use a hyphen between an ordinal number and *grade* in an adjectival phrase (e.g., second-grade students), but *grade* followed by a cardinal number should be open in such a phrase (e.g., grade 2 students). Note **Nouns before Numerals** in Appendix B.

hands-off; hands-on (adj.)

high-needs (adj.): A student or students with special needs: high-needs student; high-needs students.

high school: Grades 9-12. Also called *secondary school*. Not hyphenated in any position.

incentivize: Jargon; do not use. Substitute "provide an incentive for."

individualized education program; individualized education plan (IEP)

in-service (adj.); **preservice** (adj.): *Preservice* and *in-service* both appear in *Webster's*, the first closed up, and the second with a hyphen. Thus, the adjectives that we customarily use to designate, respectively, those who are preparing to enter the teaching profession and teachers whose careers are under way are not parallel in form.

International Baccalaureate (IB) program: See **Advanced Placement**.

Iowa Tests of Basic Skills (ITBS)

IRE: Common questioning pattern: a teacher *initiates* a question, a student *responds*, and the teacher *evaluates* the student's response as either right or wrong.

kindergarten (K): See **grade**.



KWL: A three-part instructional framework for helping students consider (1) what they *know*, (2) what they *want* to know (or learn), and (3) what they have *learned*.

learning: Singular; not learnings.

learning disabled gifted and talented (LDGT) students: Use no internal punctuation. Also known as *twice exceptional children*.

limited English proficiency (n.); limited-English-proficient (adj.)

login (n.); log in (v.): Use log in to instead of log into.

logon (n.); log on (v.): Use *log on* to instead of *log onto*.

middle school; middle-grades (adj.): Usually designates grades 6-8; sometimes refers to grades 5-8.

Multi-Tiered System of Support (MTSS)

multiple choice (n.); multiple-choice (adj.)

multiple intelligences (n.); multiple-intelligences (adj.)

National Assessment of Educational Progress (NAEP)

National Board certification (n.); National Board-certified (adj., with en dash); National Board Certified Teacher (NBCT); National Board Certified Teachers (NBCTs)

NCATE standards; National Council of Accreditation for Teacher Education (NCATE) standards

on task, off task (adv. or adj. not followed by a noun); on-task, off-task (adj. preceding a noun): "He remained on task." "Her off-task discussion was distracting."

paper-and-pencil test; paper-and-pencil activity (Or the reverse: pencil-and-paper test; pencil-and-paper activity.)

policymaker (n.); policymaking (n. and adj.)

prekindergarten (PK): Use the shortened form PK not pre-K.

preservice: See **in-service**.

pretest; posttest (n. and adj.)

primary grades; lower grades: Generally, Kindergarten-Grade 2. Not hyphenated in any position. *Primary grades* is more common than *lower grades*.

problem-based learning (PBL)



problem solver; problem solving (n.); **problem-solving** (adj.)

professional learning community (PLC)

pull-out program

QR code: Abbreviation for “quick response code.” A matrix barcode that is readable by a smartphone and gives access to information on the web.

read aloud (n.)

real world (n.); **real-world** (adj.)

Response to Intervention (RTI)

results-based

risk-taking (n.); **risk-taker** (n.); **risk-taking** (adj.) (Use the hyphens, per M-W, for Chicago and APA.)

SAT; SAT Reasoning Test (SAT I); SAT Subject Tests (SAT II): Originally, the test devised by the College Board and referred to as the *SAT Reasoning Test* (or *SAT I*) was called the *Scholastic Aptitude Test* (or later, the *Scholastic Assessment Test*). The *SAT Subject Tests* (also known as *SAT II*) were formerly known as the *Scholastic Achievement Tests*. The College Board website does not currently attach words to the initials *SAT*.

SATs; SAT scores

scaffold (n., v.): Has a particular meaning in education and is widely used; however, providing a brief description can be helpful in some contexts. To *scaffold* learning is to erect a structure that allows students to advance with maximum independence from the level that they have mastered to the next level that they are capable of attaining.

school-age children: Not school-aged children.

scope and sequence (n.); **scope-and-sequence** (adj.)

seatwork

secondary school: Generally, grades 9-12. Not hyphenated in any position. See high school.

sense making (n.); **sense-making** (adj.): NCTM style differs from that of Merriam-Webster.

socioeconomic status (SES): The abbreviation SES is often modified by the adjective *low* (e.g., low SES students) in reports examining disparities in achievement among students grouped by demographic, ethnographical, cultural, or economic characteristics. In some contexts, the meaning of SES can be assumed to be clear to the audience, but in most contexts, the term should be spelled out on the first appearance.



special education (See **general education**.)

special needs (n.); **special-needs** (adj.)

standardized test; standardized testing

Standards of Learning (SOLs)

STEM; STEM education: Acronym for *science, technology, engineering, and mathematics education*. In some contexts, the meaning of STEM can be assumed to be clear to the audience, but in most contexts, the term should be spelled out on the first appearance.

student teacher: Not hyphenated in any position.

students with disabilities; students with special needs

subject area (n.); **subject-area** (adj.): Lowercase school subjects unless they are proper nouns (e.g., geometry, history, English), but capitalize the names of particular courses.

subject matter (n.); **subject-matter** (adj.)

teachable moment: Quotation marks are unnecessary.

teacher leader: A teacher leader has professional responsibility that exceeds that of a classroom teacher, contributing his or her time and talents to the educational community or to special interest groups in that community. Do not hyphenate in any position.

Third International Mathematics and Science Study (TIMSS)

turnaround school: Federal designation for a low-performing school that has made dramatic improvement.

twice exceptional children: Do not hyphenate. (See **learning disabled gifted and talented students**.)

upper elementary grades; upper grades: Generally, grades 3-5.

worksheet: *Activity sheet* is preferable.

Mathematics Education

AAA: Similarity theorem for triangles, sometimes written as “angle-angle-angle.” Letters are roman.

AAS; ASA; SAS; SSA; SSS: Congruence theorems for triangles, sometimes written as “angle-angle-side”; “angle-side-angle”; “side-angle-side”; “side-side-angle”; and “side-side-side,” respectively. Letters are roman.

box-and-whisker plot



Cartesian; Cartesian plane; Cartesian grid

“chunking” numbers

cognitively guided instruction (CGI)

data set

distributive property of multiplication over addition; distributive property: Give whole name the first time. All properties of numbers and operations are lowercase.

double count

equals sign: Use instead of *equal sign*. This equals that.

fundamental theorem of arithmetic; law of large numbers; etc.: Lowercase laws, theorems, and the like, according to Chicago style (see Chicago 8.148) as well as APA 6.16.

greatest common factor (GCF): The initials GCF are customarily roman.

least common denominator (LCD): The initials LCD are customarily roman.

least squares line of best fit; least squares line of fit; least squares regression line: Some NCTM publications have hyphenated “least squares”; leaving the phrase open is more conventional.

line *A*; segment *AB*; point *P*; angle *ABC*; etc.: In general, italicized letters used for lines, segments, angles, and so on, appear either after a word descriptor, such as *line* or *angle*, as above, or in association with a symbol (e.g., \overline{AB} , $\angle ABC$). Using both words and symbols is redundant.

line of best fit

mathematical discourse community (MDC)

mathematize (v.)

mental math

***N*, *n*.** In statistics, capital *N* refers to population size, and lowercase *n* refers to sample size.

ordered pair: Show in parentheses, with a comma followed by a space: (*x*, *y*), (4, 52)

part-whole relationship

Pascal’s triangle; Pythagorean theorem: Capitalize only the proper names, which often appear in possessive or adjectival forms.

place value (n.); **place-value** (adj.)

relatively prime numbers



regression equation

scatterplot

skip-count (v.); **skip counting** (n.)

stem-and-leaf plot

story problem: Used more frequently today than *word problem*.

x- and y-values; x- and y-axis

xy-plane

zeros. Use instead of *zeroes*.

Materials in the Mathematics Classroom

base-ten blocks (NCTM used to use words for numbers 1-99 in publications based on Chicago style. Now we used the alternate Chicago style of spelling out only numbers from 1-9. However, we retain the words for *base-ten*, *hundred chart*, *ten-frame*, etc. **unless referring to the actual base: base 2, base 10**)

blackline; blackline master

counters

connecting cubes

Cuisenaire® Rods

dot paper

five-frame; ten-frame

flip chart

geoblocks

geoboard

geodot paper

The Geometer's Sketchpad; GSP on second reference

GPS. *Global positioning system*; no need to spell out in most contexts.

grid paper. Use instead of *graph paper*.

hundred chart; hundred board



isometric dot paper; isodot paper

math manipulative; manipulative aid

Mira. A small plastic product that creates a reflection of a figure.

number cube

pan balance. Or just *balance*.

pattern blocks

place-value blocks

random number generator

semilog graph paper

ten-frame

TI-84: Identify calculators by the maker and model number. *TI* is widely known to stand for *Texas Instruments* and may be used with the model number.

Guidelines for Style and Usage

Abbreviations

Restrict the use of most abbreviations to parentheses, tables, or other locations where space is at a premium.

US: Show without periods, and use as an adjective. US is also allowed as a noun, but only if the meaning is clear from context. APA uses the periods: U.S.

Academic degrees: Show abbreviations without periods, as above. In general, NCTM does not include degrees with authors' or members' names in the journals. Use of them in Books is less stringent.

Bachelor of Arts (BA); bachelor's degree; bachelor's

Master of Arts (MA); master's degree; master's (master's thesis)

Doctor of Philosophy (PhD); doctorate; doctoral degree (PhD dissertation; doctoral dissertation; doctoral thesis)

Doctor of Education (EdD)

Acronyms and other abbreviations formed from initials (*initialisms*): Show in parentheses after the first appearance of a fully spelled-out name—for example, "National Council of Teachers of Mathematics (NCTM)." If the abbreviated form is not used subsequently in text, introducing it is unnecessary, and it should usually be omitted. Note that *the* does not



ordinarily precede acronyms or initialisms and that these short forms are customarily treated as singular, even if the full names are plural.

State abbreviations: Use two-letter postal abbreviations over traditional abbreviations when state names are used in reference lists, tables, etc. Spell out state names when they stand alone in running text: “NCTM headquarters are located in Virginia.”

Spell out state names when used with the name of a city (except for DC/D.C.): “NCTM headquarters are located in Reston, Virginia.”

News releases use the traditional abbreviations for parenthetical references—for example, “Harry Reid (D-Nev.).”

Units of measure: Metric abbreviations appear without periods (e.g., cm, mg, dL; abbreviate *liter* as L instead of l for readability). Metric abbreviations for time differ from customary (English) abbreviations for the same units (e.g., s vs. sec.). Abbreviations of customary units take periods in Chicago style (e.g., ft., yd.) but not in APA style (see 6.27).

Chicago style retains the periods in all expressions using customary abbreviations—for example, “2 ft. + 3 ft.”; “ft./sec.”

Units of measure are spelled out in running text in Chicago style.

Types of files: In text referring to a file type, use all caps (e.g., PDF, JPEG, TIFF).

Saint; St.: In text, capitalize and spell out *Saint* in the names of saints. However, follow customary practice or known preferences in the names of people, places, organizations, or publications (e.g., St. Louis, Missouri; St. Mary’s College of Maryland). If you are unable to determine common practice or personal preference, spell out *Saint* in the name. (See Chicago 10.20 and 10.30).

Eras: Use BCE (*before the Common Era*) and CE (*of the Common Era*) instead of BC and AD, respectively. Both BCE and CE should appear without periods and follow the year (e.g., 513 CE).

Active Voice

Sentences with verbs in the active voice are generally stronger and more direct than sentences with verbs in the passive voice. In active constructions, the subject of the verb is the *doer* rather than the *receiver* of the action of the verb, as in passive constructions.

Passive voice: Larry was tagged out by Mary after he was waved home by Jeanne.

Active voice: Mary tagged Larry out after Jeanne waved him home.

Recast sentences and clauses that appear in the passive voice as constructions in the active voice when doing so is possible and effective. Try to minimize the use of passive constructions.



Campuses of Universities

To determine how to represent the names of colleges and universities, check their websites. Clicking on “About” on the home page is often a useful way to find an official name. The Association of American Colleges and Universities maintains an extensive list of member institutions of higher education. The list has links to each member’s website and can be bookmarked for quick reference: <http://www.aacu.org/membership/list.cfm>. Some institutions use a comma to set off a place name (e.g., California State University, Northridge). If such a name appears in the middle of a clause, a second comma should follow the place name. Other institutions use a dash to set off a place name; use an en dash in these cases (e.g., University of Wisconsin–Madison) with no punctuation after the place name (see Chicago 6.46 and 6.81). Some universities retain “at” in their names, such as the University of Texas at Austin. Do not use the word *The*, with a capital *T*, as the first word in the name of a university or college unless the institution’s website clearly indicates that *The* is part of the official name. (Penn State is an example of one such university—the website gives “The Pennsylvania State University” as the official name. The Ohio State University (OSU) is another; note that it differs from University of Ohio.)

Capitalization

Entities within NCTM: See NCTM-Specific Terms for words that are capitalized when they refer to NCTM entities (e.g., Council, Board, Affiliate, Standard).

Names of committees: Use initial caps, but lowercase the word *committee* when it is used alone to refer to the committee (see NCTM-Specific Terms).

Example: We will meet with the Regional Services Committee tomorrow. Members of the committee will furnish the names of volunteers.

Titles of persons: Capitalize when they precede the name; lowercase when they come after the name (see NCTM-Specific Terms).

Example: NCTM President Jane Taylor will speak on fractals. James Prime, NCTM president-elect, will preside at the meeting.

Titles of works: Always capitalize the first and last words; capitalize all other words except *a*, *an*, *the*, prepositions, and coordinate conjunctions.

School subjects and courses: Lowercase general subjects (e.g., algebra, geometry, trigonometry), except for proper nouns (e.g., Euclidean geometry, American history, French). Treat first-year algebra and second-year algebra (often called *algebra 1* and *algebra 2*, respectively) as generic subjects and use arabic numerals to designate the year. Capitalize course names that identify a special topic for study (e.g., Problem-Solving Strategies in Geometry). Capitalize *Advanced Placement* (AP) and *International Baccalaureate* (IB) and the names of specific AP and IB courses (e.g., AP Calculus AB).

OK: Use the two-letter form with no periods instead of *okay*.

Laws, theorems, principles, and the like: Capitalize only associated proper names (e.g., Moore’s law, Avogadro’s theorem, law of cosines).



The initial letter in a quotation: It is permissible to change an initial letter in the first word in quoted material to a capital or lowercase letter to conform to the surrounding text. If a quotation that is only part of a sentence in the original forms a complete sentence as quoted, an initial lowercase letter may be changed to a capital where the structure of the text suggests it. (See Chicago 13.13.)

Seasons: Lowercase in ordinary use in running text; initial cap in reference citations.

State: Capitalize *state* when it appears as part of a proper noun: New York State.

Contractions

With the exception of *let's*, NCTM publications almost always spell out pronouns as well as forms of *to be* rather than using contractions such as *he's*, *we're*, *you're*. However, these and other contractions are acceptable and conventional in marketing and web copy, instances of dialogue, and in copy for *Summing Up*.

Dates

Use the conventional month, day, year style (September 3, 2019) rather than an inverted style (3 September 2019).

Write out the month instead of using a number: October 11, not 10/11 or 10-11.

Use a cardinal number rather than an ordinal number in a date: May 15, not May 15th.

Do not use a comma between month and year in a date given in month-year form (September 2019), but use a comma after the year in a date given in month-day-year form if the date appears in running text: "On September 3, 2019, Maria announced her decision."

Ellipsis Points

Use three dots to indicate an omission within a quotation. A three-dot ellipsis may indicate an omission within a sentence or a longer passage. When the last part of a sentence is omitted in a quotation that continues beyond that sentence, use four dots to indicate the end of the sentence and the omission. The first word of the sentence following the four dots may be capitalized even though it is not the first word of the sentence in the original. Do not mark an omission at the beginning or the end of a quotation with an ellipsis. A three-dot ellipsis may also be used to indicate faltering speech or speech that trails off. The NCTM style is to add a space between the dots (. . .) rather than using the ellipsis symbol.



Hyphens and Related Matters

Always consult Merriam-Webster.com, Chicago 7.89, and APA Tables 6.1 to 6.3.

CLOSED-UP WORDS

blackline	fundraising (n.)	schoolteacher
childcare (n.)	guideline	schoolwork
classwork	login (n.)	socioeconomic
copyeditor (n.)	nonprofit	timeline
coursework	ongoing	timetable
eBook, eChapter (for NCTM product lines)	online	toolbox
email	prealgebra, precalculus	voicemail
	schoolchildren	website

HYPHENATED WORDS

box-and-whisker plot	middle-grades (adj.): middle-grades students—but middle school students (no hyphen)	self-aware (similarly, self-conscious, self-assessment)
CD-ROM		skip-count (v.); skip counting (n.) (open)
decision-making (but sense making without a hyphen)	off-site (adj.; adv.): off-site training; day care off-site	ten-frame (similarly, ten-bar, hundred-square, etc.)
e-commerce, e-reader	on-site (adj.; adv.): on-site registration; printed on-site	toll-free call (but call toll free)
e-Standards		two-year-old (n.; adj.) (but 2-year-old in APA; see APA 6.32 to 6.39)
fourth-grade (adj.): fourth-grade students	second-year (adj.): second-year algebra	warm-up (n.; adj.)
health-care (adj.): health-care reform		

Adjectives modified by *well*, *lesser*, etc. are hyphenated before the noun (e.g., a well-educated public) and open after a noun (e.g., the public was well educated).



OPEN PHRASES

African American student: (in general, do not hyphenate descriptions of people)	game board	reform mathematics movement
	group work	road map (n.)
algebraic thinking activities	health care (n.)	skip counting (n.); skip-count (v.) (closed)
blackline master	hundred board, hundred chart	special education class
cooperative learning groups	log in (v.)	staff development seminar
count on (v.): "To solve the problem, we count on from seven."	mathematics education community	teacher education programs
cross multiplication	mathematics teaching force	tool kit: NCTM products are referred to as toolkits
decision maker	Native American student	warm up (v.)
early childhood education	peer assessment	whole number system
fourth grade, fourth graders (n.)	professional development program	

Lists *(APA style differs from Chicago style; see APA 6.52)

All entries in lists should be parallel in form. This rule also applies to second- and third-order subheads in books and articles, since these subheads represent lists in outline form. Lists can be vertical or horizontal, depending on length, complexity, and desired visual impact.

HORIZONTAL, RUN-IN LISTS

Short, relatively simple lists can be "run in" horizontally with regular text. Introduce each item by an arabic numeral or a lowercase italic letter enclosed in parentheses if doing so increases clarity.

Example: The three ideas that the students needed to understand were (1) that an isosceles triangle has two equal sides, (2) that a triangle that has two equal sides also has two equal angles, and (3) that if an isosceles triangle is a right triangle, then each of the two equal angles measures 45 degrees.

VERTICAL LISTS

Longer lists are often more effective in vertical arrangements. Use a bullet, a number (followed by a period), or a letter (lowercase italic, enclosed in parentheses) to introduce entries in vertical lists. Vertical lists are of two types, depending on their syntactical relationship to the sentence that introduces them:

A vertical list following a colon: A vertical list follows a colon only if the sentence that introduces it forms a complete thought (is an independent clause, with a subject and a verb). Such a list has the following characteristics:

- The first letter of each item is capitalized.
- No punctuation appears at the end of any item, including the last, unless the item is a complete sentence, which takes a period.

A vertical list following an em dash: A vertical list follows an em dash if its items are syntactically necessary to complete the sentence that introduces it. In such a list—

- the first letter of an item is lowercase;
- a semicolon appears at the end of each item except the last, which has a period; and
- the inclusion of *and* is permissible before the last entry, after the semicolon at the end of the next-to-last item.

When a list follows an em dash, the syntax of the sentence that includes the list frequently calls for *and* before the last item.

Any list, whether vertical or run in, must enumerate the items if the text that precedes it specifies the number of items. However, any list may be enumerated for clarity, even if the text that precedes it does not specify the number of items.

Mathematics and Symbols

The following guidelines apply to Chicago style. For APA consult section 6 of the 7th edition. If it is necessary to break an equation at the end of a line in running text, make the break *after* an operation sign or relation symbol (\times , $=$, $>$, $<$, etc.).

If it is necessary to break an equation that is displayed (set off from the regular text), make the break *before* an operation sign or a relation symbol.

By convention, no punctuation follows a displayed equation that is preceded by a colon. In such a case, the sentence that introduces the equation forms a complete thought (it is an independent clause, with a subject and a verb). By contrast, when a displayed equation is syntactically part of the sentence that introduces it, it is followed by any punctuation (e.g., comma, period) that the syntax requires.

In general (for Chicago style), spell out *percent* after a numeral in text. The symbol % can be used some contexts: in parentheses, in problems presented to students, and in tabular and other close-set matter. It can also be used instead of the word *percent* in math-intensive material where the symbol is more conventional than the word.

By convention, the shortened forms of metric units are regarded as symbols, not abbreviations, and thus do not take periods (e.g., cm, k, g, L). Retain the periods in operations (e.g., 2 ft. + 3 ft. = 6 ft.).



The measure of an angle—say, $\angle ABC$ —is represented symbolically as $m\angle ABC$, with an italic m .

Do not use a Greek delta (Δ) to stand for a triangle. If a triangle symbol is not available, write “triangle ABC ” instead of “ ABC .”

Numbers

For numbers in *MTE* and *JRME*, use the APA style guide. For Books and *MTLT*, spell out numbers from one through nine, and use numerals to represent numbers 10 and higher.

This is a departure from Chicago and from previous NCTM style.

Spell out numbers at the beginning of a sentence.

Example: Forty-five states have adopted the Common Core State Standards.

Rewrite when spelling out a number that requires a long phrase or results in a sentence that treats numbers in different ways, making comparisons challenging:

Example: Two hundred fifty-six students graduated with honors, with 137 planning to go to college.

Possible revision: Of 256 students graduating with honors, 137 students were planning to go to college.

Spell out round numbers or approximations.

Example: About thirty thousand students participated in the World’s Largest Math Event last year.

Use numerals when focusing directly on numbers, operations, or numerical results.

Within a paragraph and throughout a problem, numerical forms should be consistent unless the author consciously wishes to vary the usage.

In activity sheets for students, use numerals.

Numerals should always be used with a metric symbol (e.g., 2 cm, 10 dL).

Numerals should always be used before the word *percent* or a percent symbol (e.g., 37 percent, 37%).

Be consistent in expressing ranges of numbers: Use, for example, “from 1956 to 1967,” not “from 1956-67.”

In abbreviations of ordinal numerals (1st, 2nd, 3rd, 4th, 5th, etc.) use full-size characters in the endings *-th*, *-nd*, and so on. Do not allow Word to “autocorrect” these characters to small superscripted forms. Observe this practice of using full-size characters with expressions such as “*n*th” and “zeroth.”

Title I; Chapter 1. Use a roman numeral and an arabic numeral, respectively, for these



government programs. Capitalize the noun before the numeral in these and other such designations of parts of legislation. (This is an exception to the general rule about lowercase nouns before numerals.)

Spell out the plural form of a number in an expression such as “count by ones,” but use a numeral in an expression such as “multiply by 5.”

In designations of place value, spell out *ones*, *tens*, *hundreds*, and so on in such phrases as “ones digits” and “tens place,” using the plural with no possessive.

- In expository text, use *base-ten numeration system*, or *base-ten system*, but in copy that focuses on numbers, use numerals in phrases such as “base 2” and “modulo 7.”
- **In a departure from previous NCTM style**, in numbers with four digits (and more), separate groups of three digits in the conventional way by using commas (e.g., 4,567). Years or temperatures are exceptions to this rule.
- Displayed fractions can use customary spacing.

Parallelism

Parts of a sentence that are parallel in meaning should be parallel in structure. Examples of this principle occur often in series or in lists.

Incorrect: Do you suggest that I act now or to wait until tomorrow?

Correct: Do you suggest that I act now or wait until tomorrow?

Incorrect: Hunting, fishing, and to tell a joke well were his greatest pleasures.

Correct: Hunting, fishing, and telling a joke well were his greatest pleasures.

Incorrect: This plan is quick, easy, effective, and makes good sense.

Correct: This plan is quick, easy, and effective and makes good sense.

Incorrect: She is not only intelligent but she is also pretty.

Correct: She is not only intelligent but also pretty.

Parentheses

Use parentheses to set off text that has no necessary connection to the rest of the sentence or discussion in which it appears.

Use parentheses to set off letters or numbers that identify items in a series in a sentence—for example, “The study identified (a) the causes, (b) the manifestations, and (c) the consequences of the students’ confusion.” Do not italicize any of the listed items in the series.

Use parentheses to group mathematical expressions.



Possessives

Avoid using an apostrophe with the name of an organization or program consisting of more than one word.

Incorrect: The National Council of Teachers of Mathematics's goal was simple.

Incorrect: Educators recognize Race to the Top's importance in US education policy.

Recast such sentences:

Example: Educators recognize the importance of Race to the Top in US education policy.

Using an apostrophe with the acronym of an organization or program is acceptable if the full name has been introduced previously in the text.

Example: NCTM's goal was simple.

In Chicago and APA styles, possessives are formed by adding 's to a singular name or word, including those ending in s (see CMS 7.16 ff and APA 6.11). AP does *not* use an s on words ending in s.) Plurals add just the apostrophe. (*Examples:* Charles's manuscript; the girls' toys)

students' work; student work: Work *by* students may be identified as either *student work* or *students' work*, depending on which is smoother and clearer in context. Work *for* students (prepared for and assigned to students) is *student work*.

Punctuation and Grammar

Use *that* to introduce a restrictive clause; use *which* to introduce a nonrestrictive clause. A restrictive clause provides information that is essential; a nonrestrictive clause provides extra information. A comma always precedes *which* in a nonrestrictive clause but never precedes *that* in a restrictive clause.

Nonrestrictive: My favorite tree, which I often climbed when I was young, is the red oak in our backyard. (*Clause gives extra information about the favorite tree.*)

Restrictive: The tree that I climbed most often is the sugar maple in our backyard. (*Clause gives information that is essential for identifying the tree in question.*)

Use the serial, or Oxford, comma—a comma before the conjunction in a series.

Use a comma before a coordinating conjunction that joins two independent clauses in a compound sentence unless the clauses are very short and closely connected.

Examples: Arne Duncan discussed his department's priorities for education, and his deputy focused on the administration's Race to the Top program.
Mary ran and Jack skipped.



This guideline also applies to compound sentences with imperative verbs.

Examples: Discuss the Council's plans for professional development, and be sure to focus on the upcoming summer institutes.
Run for ten steps and skip for five.

Do not use a comma before a conjunction in a clause with a simple subject and a compound verb.

Incorrect: Secretary of Education Arne Duncan discussed his department's priorities, and focused on the Obama administration's Race to the Top program.

In most cases, do not use a comma before an internal adverbial clause that precedes a clause on which it depends. An example can simplify what otherwise seems to be a complicated guideline (note that no comma comes before *if* below):

Example: Smith pored over the documents, and if Jones had not intervened, he would undoubtedly have discovered the forgery.

In the past, we did not use the pronoun *their* to refer to a singular antecedent. Although both APA (4.18, 5.5) and Chicago (5.48 etc.) now allow this, first read the pertinent sections in those style guides. Be especially careful in the case of antecedents like *audience, group, company,* and other singular nouns that represent collections.

Incorrect: The group presented their solution to the problem.

Correct: The group members presented their solution to the problem.

Or: The group presented its solution to the problem.

Just as ... so is a correlative conjunction (like *not only ... but also*). Both parts of the conjunction must be used.

The adverb *only* should be placed so that it clearly modifies what it is intended to modify.

Incorrect: Funding only plays a role when the project is well funded.

Correct: Funding plays a role only when the project is well funded.

A split infinitive is permissible.

Quotation Marks

Use quotation marks to set off the titles of exhibits; the themes of meetings, institutes, and conferences; and the titles of the units or modules in a curriculum.

Use quotation marks to set off the titles of journal articles, chapters, individual poems, and the like.

Use quotation marks to set off coined words (such as "guizzinta" for *goes into*) or words used in unconventional ways (see *neologism* in Merriam-Webster).



For a coined phrase or for an unusual use of an adjectival phrase, use either hyphens or quotation marks but not both (e.g., “rich get richer” pattern or rich-get-richer pattern).

Use single quotes inside of double quotes to set off quoted text within a longer quotation.

References and Citations

NCTM follows the style set out in “Documentation II: Author-Date References” (CMS, chapter 15) for *MTLT* and most books.

- NCTM style departs from Chicago style in the use of *p.*, which Chicago style omits. In author-date citations for direct quotations or close paraphrases of scholarly work, use *p.* before a page number.

Example: (Lopez 1958, p. 234)

- *MTE* and *JRME* are styled according to APA.

Sexism and Racism

NCTM material should reflect an appropriate mix of genders, races, and cultures in photographs, names, and content. The APA manual offers an excellent discussion of reducing bias in language. As this discussion stresses, it is important to be sensitive to labels, often putting the person first (e.g., learner with disabilities) and never equating the person with the condition (e.g., the LDs). Avoid hyphens in modifiers of more than one word for racial and ethnic groups (e.g., Asian American students) to give equal importance to all descriptors. Capitalize all descriptors of race (see also **Word Usage**).

In matters related to gender, problems with pronoun agreement can often be resolved by changing the referent to a plural or by recasting the sentence. Otherwise, use *his and her*, *her and his*, or—when they apply to different referents—*his* and *her* alternately. However, see Chicago 5.48 and APA 4.18.

Example: One student gave her answer, and a classmate offered his alternative solution.

Correct but

awkward: Each student had his or her own pencils.

Better: All students had their own pencils.

Use *gender* rather than *sex*: *gender issues*, *gender differences*, *gender studies*. *Gender* refers to role and is cultural; *sex* refers to biology.

Use he or she, or she or he, not (s)he.

Software Programs

Show the ™ symbol or the ® symbol after the first mention of software that is, respectively, a registered trademark or an unregistered trademark. See Appendix C for names and appropriate symbols.



Subject-Verb Agreement

The phrase *more than one* is singular.

Example: More than one source has been cited.

The title of a book always takes a singular verb.

Example: *Principles and Standards for School Mathematics* issues a call for all students to engage in more challenging mathematics.

The word *data* is plural.

Example: The data show an increase in productivity.

The word *mathematics* is singular.

Example: The mathematics of this situation is more complex than one might think.

Substitutes for Overused Words and Phrases

case: situation, example, instance

critical; crucial: necessary, indispensable, unavoidable, fundamental, vital, cardinal, essential, basic, inherent, intrinsic, urgent, pressing, severe, serious

given: because, since, as a result of, depending on

inform: indicate, guide, affect, modify, adjust, influence (decisions about or the development of), impinge on, benefit, inspire, animate, enlighten, serve as a basis for, shape, take into account, direct; **informed by:** permeated by, based on, characterized by, relied on, used elements of.

key: important, essential, fundamental, vital, primary, pivotal, strong, notable

lens, in such phrases as **use as a lens; take as a lens:** bring into focus, provide a useful vantage point, give a frame of reference, offer a new perspective; sharpen the focus on

motivate: inspire, stimulate, generate, introduce, provoke, produce, prompt, influence, induce, suggest, enhance, assist, encourage

provide: furnish, supply, produce, offer, yield, present, propose, suggest, submit, afford, give, reveal, demonstrate, support, create, maintain, facilitate, serve as, promote, foster, pose, outfit, forge, formulate, examine, guarantee, act as, lend, allow, generate, set, establish, compose, develop

springboard, in such phrases as **act as a springboard:** introduce, provide an entry point, serve as a bridge, lead (into)



Tables and Figures

Mathematics Teacher: Learning and Teaching PK-12 (MTLT) and NCTM books follow the guidelines outlined below:

- In a figure caption, abbreviate, use an initial cap, bold face, and italics for the word *figure*:
Fig. 8.1.
- Use a period after a figure caption only when it is a complete sentence.
- For a figure reference in the text (including within parentheses), use body text (no bold, no caps, no italics) and spell out *figure*.

Treat as tables only those elements that really are tabular matter. Other elements consisting of text should be treated as figures.

Telephone Numbers

NCTM shows the area codes of telephone numbers in parentheses: (202) 365-0226; (1-800) 977-8000. Extensions follow the number as shown: (703) 620-9840, ext. 2278.

Titles of games

tic-tac-toe: This traditional game has many name variants. NCTM prefers this form.

A widely known and long-established game that is not trademarked is lowercase.

Example: The family played rummy during the storm.

A trademarked game has an initial uppercase letter. Show the symbol ® or the symbol ™ after the first use of the name.

Example: The family played Monopoly® during the storm.

Show a made-up game, often invented by a teacher, in quotation marks with initial caps.

Example: To help her students understand place value, Ms. Wilson devised a counting game that she called "Hens and Chickens."

Titles of problems

Lowercase the titles of well-known problems (treat in the same way as laws and theorems).

Example: He was intrigued by the four-color problem.

Use initial caps for the title of a particular problem that is stated and discussed at length in text. Lowercase the word *problem* when it follows the title in running text.

Examples: Students studied the Road Ahead problem to calculate distances.
The students enjoyed solving Decimal Dilemma.



Titles of works

Use headline-style caps and set in quotation marks the titles of folk tales, fables, etc.

Themes (e.g., of conferences) and titles of sections (heads) in a chapter, of workshops, and of meeting sessions are capitalized and shown in quotation marks.

The titles of projects are capitalized and set in roman type, with no quotation marks (for instance, Connected Mathematics Project, Team Learning in Schools project). (Note that *project* is sometimes part of the title and capitalized and sometimes is not part of the title and lowercased.)

The titles of regular departments in a magazine or journal have headline-style capitalization but no quotation marks (Chicago 8.177, 14.190, and 14.195).

Example: Problems to Ponder is a department in the new *MTLT* journal.

Word Usage and Terminology

above: Alternatives include previous, preceding, and earlier.

Incorrect: The above example involves a quadratic equation.

Correct: The example above involves a quadratic equation.

afterward; backward; toward: Not afterwards, backwards, towards

affect; effect: *Affect* and *effect* are both verbs, and both are also nouns. However, *affect* usually functions as a verb, meaning *to influence or have an impact on*—and is much more likely than *effect* to be the correct verb to choose.

Example: Working in groups can affect students' regard for their classmates.

By contrast, *effect* usually functions as a noun, meaning *result*—and is much more likely than *affect* to be the correct noun to choose.

Example: Research has examined the effects of group work in the classroom.

As a noun, *affect* appears primarily in the context of psychology, where it indicates emotion or a range of emotions that someone expresses (e.g., a flat affect, a blunted affect). As a verb, *effect* appears rather infrequently and means *to bring about* (e.g., to effect a change).

all- (combining form): all-around, all-out, all-clear, all-time

all of: Delete *of* if possible. Use, for example, “all the students” in place of “all of the students.”

alternate; alternative: The verb *alternate* indicates that two things occur in turn, first one and then the other. Similarly, the noun *alternate* usually indicates the other one of two possibilities. *Alternative* often simply indicates another choice—one of two *or more* possibilities—and is often the better word to use.



altogether; all together: Altogether means entirely, wholly, or in total.

Example: Showing two beans in her left hand and another two in her right, the kindergartner announced that she had four beans altogether.

All together indicates a collecting or gathering of a set of people or things in one place at one time.

Example: When the students were all together, the teacher led them out of the museum and onto the bus.

and/or: Avoid *and/or*; use one or the other. (A simple *or* is *inclusive*—that is, it means “one or the other, or both.” Thus, *or* usually covers the options that writers intend to present by using *and/or*.)

appendix: (see *vertices*)

as: Do not use *as* to mean *since* or *because*.

author: Do not use *author* as a verb; substitute *write*.

based on; on the basis of: Use *based on* phrases adjectivally. The two sentences below include nouns (*book* and *report*, respectively) modified by participial phrases beginning with *based on*:

Correct: I always enjoy a book based on actual experience.

Correct: Based on incomplete results and faulty methods, team A's report was worthless.

Do not use *based on* phrases adverbially. In the following two sentences, *based on* is used incorrectly because it points to the action of the verbs *decided* and *changed*, respectively:

Incorrect: Based on what the students said, the teacher decided that the test was unfair.

Incorrect: The driver suddenly changed direction based on information from her GPS.

Substituting the adverbial phrase *on the basis of* for *based on* can repair the problem in these and many similar sentences:

Correct: On the basis of what the students said, the teacher decided that the test was unfair.

Correct: The driver suddenly changed direction on the basis of information from her GPS.

between; among: Use *between* when two people, things, or ideas are in question. Use *among* in cases of more than two. *Between* can also be used with multiple objects considered as two groups.

Example: The relationship between the *x*-value and the *y*-value was unclear.

Example: The relationship among the areas of the three triangles was one of similarity.



Example: The research examined the relationship between the ninth graders' scores and the tenth graders' scores.

Black; White; Latinx; Native American: Capitalize all descriptors of race.

board: The word *board* can be applied to a chalkboard a whiteboard, or, depending on the circumstances, even a SMART Board.

case: Case is sometimes used formally for a legal or medical situation or a mathematical case: "case 1," "case 2." However, it can also be used in less formal contexts, in phrases like "in such a case" or "in this case." Although it should not be overused, *case* can be a useful substitute for *example*, *instance*, *situation* in contexts where these words are overused.

compared to; compared with: Use *compared to* when looking specifically for similarities. Use *compared with* when looking for both likenesses and differences.

Examples: Patrick compared the earth to an orange.
Ms. Davis compared Jenny's solution with Michael's.

comprise, compose: The whole *comprises* the parts; the parts *compose* the whole. The passive construction *is comprised of* is incorrect; substitute *consists of*, *is composed of*, *is made up of*, or *is constituted by*.

couple of: Include *of* before a noun (for example, *a couple of students*; not *a couple students*).

due to: Use *due to* only as an adjective, not as an adverb:

Incorrect: He won the race due to his amazing surge in the last lap.

Correct: Her success was due to her hard work and good relations with others.

Possible repairs for the incorrect adverbial use of *due to* in the first sentence include the following:

*Change to
adjectival*

"due to": His win in the race was due to his amazing surge in the last lap.

*Replace
"due to" with*

"because of": He won the race because of his amazing surge in the last lap.

each other; one another: Use *each other* when two people, things, or ideas are involved; use *one another* when more than two are involved.

Each other: Pablo and Tanya talked to each other about their solutions.

One another: The students in the class looked at one another when the teacher wrote the wrong answer on the board.

elementary; secondary: Consider the context to decide whether *school* should be inserted after these adjectives. For example, would it be better to say “elementary school teachers” and “secondary school teachers” than to say simply “elementary teachers” and “secondary teachers”? Sometimes adding or omitting *school* makes a significant difference; consider “elementary mathematics” versus “elementary school mathematics.” However, in other contexts, the meaning is clear without *school*, and the longer phrase is unnecessary.

enough; sufficient: After adjectives of sufficiency, use an infinitive, not a subordinate clause.

Incorrect: Provide students with enough knowledge that they can solve problems.

Correct: Provide students with enough knowledge *to enable them to* [or *for them to*] solve problems.

etc.; i.e.; e.g.: The abbreviations *etc.*, *i.e.*, and *e.g.* are permissible only in parentheses. In text, change *i.e.* to *that is*, change *e.g.* to *for example*, and change *etc.* to *and so on*, or *and so forth*, or *and the like*. Reserve the abbreviations *e.g.* and *i.e.* for formal scholarly or research-oriented contexts, giving preference elsewhere to the English equivalents.

first, second, third...: These ordinals are correct to use in enumerating points in text; it is incorrect to use *firstly*, *secondly*, *thirdly*. . .

grade levels: Use *grades* before a range of grade levels:

Incorrect: 9-12 teachers

Correct: Teachers of grades 9-12

Strictly speaking, prekindergarten and kindergarten are not *grades*. The school grades are the numbered levels 1-12. Shorten *kindergarten* to *K* and *prekindergarten* as *PK*.

Incorrect: Teachers of grades pre-K-2

Correct: Teachers of PK-grade 2

hopefully; thankfully: Avoid using *hopefully* and *thankfully* colloquially, as sentence openers that serve to modify the sentences in a general way rather than to modify the verbs in a clear and specific way.

Incorrect: Hopefully, we will have enough money to get by until payday.

Incorrect: Thankfully, the river stopped rising before it reached our door.

In such situations, for *hopefully* substitute *I hope*, *we hope*, *it is hoped*; for *thankfully* substitute *fortunately*, *we are thankful*, *we are grateful*.

Correct: We hope that we will have enough money to get by until payday.⁷

Correct: We are thankful that the river stopped rising before it reached our door.



Using *hopefully* and *thankfully* is permissible to modify the verb in a specific and meaningful way:

Correct: With his diploma in hand, he stepped hopefully into the future.

Correct: When the floodwaters receded, we stumbled thankfully toward our house.

if; whether: Use *if* in conditional statements.

Example: We will go if the weather holds.

Use *whether* in statements that include indirect questions to which the answer is yes or no.

Example: He wondered whether the answer was 2.

It is usually unnecessary to follow *whether* by the phrase *or not*.

impact: Avoid using *impact* as a verb. Substitute *affect* or *influence*.

index: Use the plural *indices* when *index* refers to an indicator. Use the plural *indexes* when *index* refers to a list at the end of a book. See also *vertex*.

inform: Along with “to give information to,” one of the long-standing meanings of *inform* is “to give form or character to” or “be the formative principle of.” A particular vision of mathematics education can, for example, *inform* a mathematics curriculum. This usage should not be considered education jargon or discounted out of hand. Nevertheless, in some cases, an alternative such as *shape*, *guide*, or *influence*, may communicate the meaning to readers more clearly than *inform*.

in order to: Avoid if possible; use *to* or *so that*.

in-service: The hyphenated form is an adjective and must modify a noun (e.g., *in-service* program, *in-service* activity, *in-service* teacher); the counterpart *preservice* is closed up, not hyphenated.

in terms of: Minimize the use of this phrase, reserving it primarily for mathematical contexts (e.g., “Express x in terms of y ”). Use *about* or another apt word or phrase in most other situations.

key: *Key* can mean *leading*, *prominent*, or *essential*; it doesn’t have to refer to something that metaphorically opens or unlocks.

less; fewer: Use *less* with mass amounts (e.g., *less* sugar, *less* oil, *less* oxygen); use *fewer* with countable things (e.g., *fewer* children, *fewer* purchases, *fewer* miles). However, *less* is sometimes appropriate in phrases involving countable objects that are associated with mass amounts, such as time, money, and distance—for example, “with *less* than ten days remaining before the election,” “with *less* than ten dollars in his pocket,” “he needed to travel *less* than ten miles.”



likely: Use as an adjective to indicate that an event is probable. Do not use adverbially, as a synonym for *probably*.

Incorrect: She will likely win the all-school mathematics competition.

Correct: She is likely to win the all-school mathematics competition.

man-made: Use *manufactured*.

math: In many formal contexts (including *MTLT*), spell out: *mathematics* or *mathematical*. However, NCTM uses *math* in *Summing Up* and marketing materials. *Math* appears in such phrases as *math lab*, *math coach*, *math anxiety*, and *mental math*.

may; might: *May* suggests what is possible or likely; *might* suggests what is hypothetical or uncertain.

more/most importantly are now acceptable (see Chicago 5.250).

motivate: *Motivate* means “give a motive to” or “stimulate an interest in or an enthusiasm for.” Thus, it is possible to motivate *animate* beings, but it does not make sense to suggest that something that is inanimate can be motivated. Sometimes authors assert that a particular idea “motivates the curriculum,” or “motivates the lesson.” NCTM regards this use of *motivate* as nonstandard. Often a change from *motivate* to *drive* or *move forward* is sufficient.

on-site; off-site: Webster’s now hyphenates these phrases as adverbs as well as adjectives.

Adverbial use: The books were printed on-site.

Adjectival use: The company had scheduled off-site training.

on the other hand; Use only when completing a pair with *on the one hand*.

over: Use *more than* in place of *over* when referring to number or quantity (e.g., more than two weeks, more than 750). *During* is often more appropriate when referring to a timespan.

percent; percentage: *Percent* means “per, or out of, one hundred.” Strictly speaking, *percent* is not a noun but always follows a number in a phrase (e.g., 17 percent) indicating how many out of one hundred. The phrase gives the *percentage*, and *percentage* is the noun form.

Example: In the study, 17 percent of the subjects developed high blood pressure. This percentage was higher than expected.

In copy that is heavily statistical, and to save space, it is sometimes preferable to use the percent symbol %.



rather than; instead of: *Rather than* takes the infinitive; *instead of* takes the gerund. (Note that *to* in the infinitive is customarily suppressed in constructions with *rather*.)

Examples: Rather than take a chance on the weather, we purchased indoor tickets for the Wolf Trap concert.

Instead of taking a chance on the weather, we purchased indoor tickets for the Wolf Trap concert.

reference: Avoid using *reference* as a verb. In a sentence such as, "He referenced Smith and Stein's research," substitute *cited* or *referred to* for *referenced*.

scaffold (n., v.): *Scaffold* has come to have a particular meaning in education. To *scaffold* learning is to erect a structure that allows students to advance with maximum independence from the level that they have mastered to the next level that they are capable of attaining.

sense making (n.); sense-making (adj.): NCTM uses *sense making* to mean *the process of making sense of*. Webster's gives the closed form *sensemaking* as an adjective meaning *sensible, reasonable, practicable*, as in "a sensemaking proposal." NCTM's use of *sense making* shades off in a different direction. A "sense-making activity" is not a sensible or practicable activity but one that engages students actively in the process of *making sense* of mathematics. Hyphenating adjectival instances communicates NCTM's particular meaning more clearly than the one-word adjective.

since: In a mathematical sense, *since* is often used, for example, in proofs. To avoid ambiguity of this sort, follow the convention of using *since* only in a temporal sense at the beginning of a sentence:

Example: Since 1989, NCTM has released a number of documents outlining the Council's Standards.

Change a causal *since* at the beginning of a sentence to *because*:

Example: ~~Since~~—Because he had the flu, he stayed home.

text; textbook: Use *text* when referring to the main body of a printed work. Use *textbook* when referring to a book used in the study of a subject.

There is; There are; It is: If possible, recast sentences to omit passive openers.

Example: There are now forty-five states that have adopted the Common Core State Standards.

Simple revision: Forty-five states have now adopted the Common Core State Standards.

toward; towards: Use *toward*, not *towards*.

upon; on: In general, use *on*, for brevity, simplicity, and directness. However, *upon* is permissible in the formula "once upon a time" and to mean "on the occasion of" in such phrases as "Upon his arrival in England."



utilize: Do not use *utilize*, which sounds pretentious. Substitute *use* or another apt word. Synonyms for *utilize* include apply, employ, operate, draw on, make use of; related words include handle, manipulate, wield, work.

various vs. variety of: Either is grammatically correct. A *variety of* is more effective than *various* to indicate a representative sample; *various* often means just different or of an indefinite number. In some circumstances, it may be preferable to substitute *several* or *different* for *various*.

via: Use only in a geographical sense, to indicate a route of travel between two points in space. Do not use in the more general sense of *by means of*.

Incorrect: We communicated via e-mail.

Correct: We traveled to Saint Paul via Chicago.

vertices: Use *vertices* as the plural of *vertex*. Likewise, use *indices* as the plural of *index*, but only when using *index* to mean *indicator*. In the context of books, use *indexes* as the plural of *index* and *appendixes* as the plural of *appendix*. APA uses *Appendices* (2.14) as the plural of *Appendix*.

while: Use *while* only to show that the action in two clauses is simultaneous. Otherwise, use *although* or *whereas*.



Appendix A: Chicago Style for References

Chicago 2019 (15.21) now states, "For each author-date citation in the text, there must be a corresponding entry in the reference list under the same name and date." [We used to allow it and call it a *bibliography*.] NCTM uses "p." and "pp." for page numbers.

- Book** Shute, William, William Shirk, and George Porter. 1957. *Solid Geometry*. New York: American Book.
- Electronic Book** Shaughnessy, J. Michael, Beth Chance, and Henry Kranendonk. 2009. *Focus in High School Mathematics: Reasoning and Sense Making in Statistics and Probability*. Reston, VA: National Council of Teachers of Mathematics. PDF e-book.
- For a downloaded e-book, indicate format as the last part of the citation. For a book consulted online, indicate the URL or the DOI as the last part of the citation. For a freely available electronic edition of an older work, include the URL as the last element.*
- NCTM Yearbook** National Council of Teachers of Mathematics (NCTM). 1989. *New Directions for Elementary School Mathematics*, 1989 Yearbook of the National Council of Teachers of Mathematics, edited by Paul R. Trafton. Reston, VA: NCTM.
- Article in a Book** Oakes, Jeannie. 1995. "Opportunity to Learn: Can Standards-Based Reform Be Equity-Based Reform?" In *Seventy-Five Years of Progress: Prospects for School Mathematics*, edited by Iris M. Carl, pp. 78-98. Reston, VA: National Council of Teachers of Mathematics.
- Article in an NCTM Yearbook** Usiskin, Zalman. 1986. "Reasons for Estimating." In *Estimation and Mental Computation*, 1986 Yearbook of the National Council of Teachers of Mathematics (NCTM), edited by Harold L. Schoen, pp. 1-15. Reston, VA: NCTM.



**Article in a
Book in a Series**

Good, Thomas L., and Bruce J. Biddle. 1988. "Research and the Improvement of Mathematics Instruction: The Need for Observational Resources." In *Effective Mathematics Teaching*, edited by Douglas A. Grouws and Thomas J. Cooney, pp. 114-42, vol. 1, Research Agenda for Mathematics Education. Reston, VA: National Council of Teachers of Mathematics.

PhD Dissertation

Akdag, Fusun Semiha. 1985. "The Effects of Computer Programming on Young Children's Learning." PhD diss., The Ohio State University.

McGalliard, William A. 1982. "Selected Factors in the Conceptual Systems of Geometry Teachers." Doctoral diss., University of Georgia. *Dissertation Abstracts International* 44 (1983): 1364A.

**Paper Presented
at a Conference**

Lehrer, Richard, and Paul Smith. 1986. "Logo Learning: Is More Better?" Paper Presented at the Annual Meeting of the American Educational Research Association, San Francisco, April xx, 1986.

**Article in a
Journal**

Craine, Timothy, and Rheta Rubenstein. 1993. "A Quadrilateral Hierarchy to Facilitate Learning in Geometry." *Mathematics Teacher* 86 (January): 30-36.

OR

Mathematics Teacher 86 (1): 30-36. (See CMS 15.9, 15.47, 15.8)

OR

Mathematics Teacher 86:30-36. (Note no space after the colon.)

OR

Mathematics Teacher 86, no. 1 (January): 30-36. (preferred option for *MTLT* articles)

**Electronic
Journal Article**

Battista, Michael T. 2002. "Building Properly Structured Mental Models for Reasoning about Volume." *ON-Math: Online Journal of School Mathematics* 1 (Winter). http://my.nctm.org/eresources/journal_home.asp?journal_id=6.



**Newspaper
Article**

Citations of newspaper and magazine articles are usually sufficient within the text. See CMS 14.198 15.49. If a bibliographic or reference list entry is needed, it would appear as follows:

Braun, R. J. 1993. "Schools That Flunk." *Star-Ledger* Special Report series. *Newark (N.J.) Star-Ledger*, October 24-31, 1993.

Tyler, Marshall. 1985. "200th Birthday." *Los Angeles Times*. March 15, 1985, sec. 1A, p. 3.

Letter

Pope, Alexander. 1956. Letter to William Fortescue, September 23, 1725. In *The Correspondence of Alexander Pope*, edited by E. G. Sherburne, vol. 2, pp. 323. Oxford: Clarendon Press.

**Personal
Communication**

References to personal communication (telephone conversations, e-mail messages, and the like) are usually given parenthetically in the text instead of appearing in a reference list.

(Deborah Glass, April 10, 2009, pers. comm.).



Appendix B: Chicago Style vs. APA Style at a Glance

Nouns before Numerals

Chicago style lowercases common nouns before numerals (e.g., figure 1, grade 4, day 3, and so forth).

APA style caps nouns before numerals in a numbered series (e.g., Figure 1, Grade 4, Day 3, etc.).

APA does not hyphenate comparative and superlative adjectives (e.g., higher order thinking skills)

Prepositions in Titles

Chicago style (see 8.159) lowercases prepositions, regardless of length, except when they are used adjectively or adverbially and in rare instances when they receive emphasis in a title, such as *through* in *A River Runs Through It*.

APA style caps all words of four or more letters.

Tables and Figures

JRME and *MTE* follow APA style when editing tables and figures:

- All figures and tables must be mentioned in the text. Capitalize the word, and spell it out.
- In APA style, **Table** is initial capped, roman, bold* and the title is initial capped italic** with no ending punctuation:

Example: ***Table 3**
 ***Percentage of Teachers With Qualification and Experience Characteristics by Attribute Mastery*

- In APA style, **Figure** is initial capped, bold, roman* and the title is italic** with no ending punctuation. Whereas APA figures used to have captions appearing under the figure, they now have a title above and a *Notes:* section below:

Example: ***Figure 11.** ***Proportion of Mastery by Attribute*



Author-Date Style for Citing Scholarly Work

Authors whose work is cited in text are usually named in parentheses, along with the date of their work. When authors are named directly in the text, usually as the subject of a sentence in text that discusses their work, Chicago style names up to three authors in author-date citations and treats work by more than three authors in a different manner. By contrast, APA style names one or two authors in author-date citations in text and treats work by three or more (up to 20) authors in a different manner. However, note APA 8.18 especially. Note the difference in comma use and the ampersand. In a parenthetical author-date citation, Chicago style does not use a comma to separate the authors' names from the year and spells out *and*. APA style uses a comma to separate the authors' names from the year and uses an ampersand. APA style uses *et al.* in the main text (including the first mention) as well as in parenthetical citations. Chicago uses "and colleagues" in running text.

CHICAGO

Up to three authors:

Parenthetically:

(Brown, Smith, and Jones 2004)

In text:

Brown, Smith, and Jones (2004)

More than three authors:

Parenthetically:

(Brown et al. 2004)

In text:

Brown and colleagues (2004)

APA

One or two authors:

Parenthetically:

(Brown & Smith, 2004)

In text:

Brown and Smith (2004)

Three or more (up to 20) authors:

Parenthetically:

(Brown et al., 2004)

In text:

Brown et al. (2004)



Bibliographical Citations

The following examples illustrate essential differences between Chicago and APA reference styles. APA no longer includes the city of publication. APA uses all digits in inclusive page numbers. APA doesn't use punctuation after a doi..

CHICAGO

Journal article

Bishop, Joyce W., Albert D. Otto, and Cheryl A. Lubinski. 2001. "Promoting Algebraic Reasoning Using Students' Thinking." *Mathematics Teaching in the Middle School* 6, no. 9 (May): 508-14.

Book

Stein, Mary Kay, Margaret S. Smith, Marjorie A. Henningsen, and Edward A. Smith. 2000. *Implementing Standards-Based Mathematics Instruction: A Casebook for Professional Development*. New York: Teachers College Press.
[if a doi is included, end it with a period.
Break doi before most punctuation:
<https://doi.org/xx.xxxx/xxxxxxx-xxx>.]

Chapter in a book

Blanton, Maria L., and James J. Kaput. 2004. "Instructional Contexts That Support Students' Transition from Arithmetic to Algebraic Reasoning: Elements of Tasks and Culture." In *Everyday Matters in Science and Mathematics: Studies of Complex Classroom Events*, edited by Ricardo Nemirovsky, Ann S. Rosebery, Jesse Solomon, and Beth Warren, pp. 211-34. Mahwah, NJ: Lawrence Erlbaum Associates.

APA (see 7th ed., chapter 10)

Journal article

Bishop, J. W., Otto, A. D., & Lubinski, C. A. (2001). Promoting algebraic reasoning using students' thinking. *Mathematics Teaching in the Middle School*, 6, 508-514.

Book

Stein, M. K., Smith, M. S., Henningsen, M., & Smith, E. A. (2000). *Implementing standards-based mathematics instruction: A casebook for professional development*. Teachers College Press. <https://doi.org/xx.xxxx/xxxxxxx-xxx> [no ending punctuation]

Chapter in a book

Blanton, M. L., & Kaput, J. J. (2004). Instructional contexts that support students' transition from arithmetic to algebraic reasoning: Elements of tasks and culture. In R. Nemirovsky, A. S. Rosebery, J. Solomon, & B. Warren (Eds.), *Everyday matters in science and mathematics: Studies of complex classroom events*, pp. 211-234. Erlbaum.



Appendix C: Trademarked Products

RS1/Departments/Journals/Registered Trademarks/Registered Trademarks.xls

<https://www.uspto.gov/>

Use the symbol at the first mention only.

Algebra Tiles™	Google Reader™	Notice and Wonder will be but is not yet a registered trademark.
Apple®	IBM® SPSS® Statistics	OneNote®
BlackBerry®	Intel®	Polyspace®
Blackboard®	iPad®	Popsicle®
Blackboard Collaborate™	iPod®	Post-it®
Blackboard Connect™	iPhone®	PowerPoint®
Blackboard Inc.	Internet Explorer®	Safari®
Blackboard Learn™	iTunes®	Scientific Calc-U-Vue®
Blackboard Mobile™	JMP® software	Senteo™
Blackboard Transact™	Kaleidomania!™	Simulink®
Cabri Geometry™	Sketchup™	SMART Board™
Calculation Nation®	LabPro®	smartphone
CD	Lego DUPLO®	smarttech™
CD-ROM	LEGO®	SMART™
Connecting Cuisenaire® Rods	Logger Pro®	Snow Leopard®
Cuisenaire® Rods	M&M's®	tablet PC
Dell™	Mac®	Texas Instruments™
Digi-Block	Magnetic Algebra Tiles™	The Geometer's Sketchpad®
Dynamic Geometry®	Magnetic Cuisenaire® Rods	TI-84Plus™
e-reader	MapleNet™	TI-Navigator™
Excel®	MaplePrimes™	TI-nspire™
Fathom Dynamic Data™	MapleSim™	TI-SmartView™
Software	Maple™	Unifix® cubes
GeoGebra	Mathematica®	Weigh Too® Learn Algebra Balance
Geometer's Sketchpad®	MATLAB®	whiteboard
Google: https://about.google/brand-resource-center/trademark-list/	Microsoft Office	Winplot
Google Earth™	MINITAB®	YouTube™
Google Maps™	Minitab® Statistical Software	
Google Meet™	multifix cubes	
	Nike Swoosh®	