

GED Study Guide

175+ High-Yield Terms & Concepts for the Computer-Based
GED

TemplateForge

Copyright (c) 2026 TemplateForge. All rights reserved.

This material is for personal study use. No part of this book may be reproduced or distributed without written permission from the publisher.

This guide is an independent study aid and is not affiliated with or endorsed by any certifying board or licensing authority. Always verify current exam requirements with your official source.

Contents

GED Study Guide

175+ High-Yield Terms & Concepts for the Computer-Based GED

How to Use This Guide

Exam Overview: The Computer-Based GED

Section 1: RLA - Reading & Analyzing Texts (18 Concepts)

Section 2: RLA - Writing & the Extended Response (16 Concepts)

Section 3: Math - Numbers & Operations (20 Concepts)

Section 4: Math - Algebra, Expressions & Equations (20 Concepts)

Section 5: Math - Geometry & Measurement (16 Concepts)

Section 6: Math - Data, Statistics & Probability (12 Concepts)

Section 7: Science - Life Science (18 Concepts)

Section 8: Science - Physical & Earth/Space Science (18 Concepts)

Section 9: Social Studies - Civics & Government (14 Concepts)

Section 10: Social Studies - US History, Economics & Geography (14 Concepts)

Section 11: Test-Day Strategy & Pacing (12 Concepts)

Final Review: 48-Hour Rapid Review

Test-Day Blueprint: The 10-Point Checklist

GED Study Guide

175+ High-Yield Terms & Concepts for the Computer-Based GED

Price: \$19 | Format: Markdown + PDF Workbook

Category: High School Equivalency / GED Test Prep

Design: Deep teal + warm amber

Important Disclaimer: This guide is an independent study aid. It is NOT affiliated with, endorsed by, or sponsored by the test administrator or any licensing/certifying body. Exam formats, content, and passing standards change over time, so always verify current requirements and official study materials with the authoritative source before test day.

How to Use This Guide

The GED is a computer-based high school equivalency credential made of four separate subject tests: Reasoning Through Language Arts (~150 minutes), Mathematical Reasoning (~115 minutes), Science (~90 minutes), and Social Studies (~70 minutes). Each is scored 100-200, and you pass each one with a 145 or higher. You can take the four tests in any order and schedule them separately. This guide organizes the high-yield terms and concepts tested on each subject - one section per test - plus an exam overview, a final review, and a test-day strategy. Work through the sections in order; each concept gives you key facts, a high-yield GED tip, and where useful an example.

Exam Overview: The Computer-Based GED

The GED is taken on a computer at an authorized Pearson VUE test center (many states also offer online proctored testing from home). It is four separate subject tests: Reasoning Through Language Arts (~150 minutes), Mathematical Reasoning (~115 minutes), Science (~90 minutes), and Social Studies (~70 minutes). You can take them in ANY order and on different days - most people schedule subjects one at a time so they can focus prep on a single test. You must pass all four to earn the credential.

Scoring: each subject test is scored on a 100-200 scale. A score of 145-164 is passing (High School Equivalency). 165-174 is GED College Ready - you are ready for college-level courses and may skip placement testing. 175-200 is GED College Ready + Credit - you may qualify for up to 10 college credit hours, depending on the college. Below 145 is not passing. There is NO penalty for guessing, so answer every question.

The computer format: one question at a time on screen, with tools like highlighting, a flag-for-review function, an on-screen notepad, and (on Math) the TI-30XS scientific calculator for the calculator-allowed part. The RLA test has a 45-minute extended response timed separately, plus a 10-minute break. The Math test has two parts with a short break, and the math formula sheet is provided on screen. Take the free tutorial and a GED Ready practice test on ged.com before your first attempt.

Retakes: if you do not pass a subject, most states let you retake it up to two times with NO waiting period; after your free retakes, a 60-day wait applies between attempts. Fees and exact rules vary by state - check your state's GED program page. Schedule one subject at a time, use your score report to target your weakest skill areas, and retake only when a GED Ready test says you are in the passing range.

Section 1: RLA - Reading & Analyzing Texts (18 Concepts)

Reasoning Through Language Arts, ~150 min total (includes the 45-min extended response and a 10-min break). Reading questions cover both literary and informational passages; the answer is always supported by the text.

#	Term	Key Facts	GED Tip	Example
1	Main Idea / Central Idea	The main idea is the single idea the whole passage supports - the 'big picture'. Supporting details, examples, and evidence all point back to it.	The correct summary covers the WHOLE passage; an option that only covers one paragraph is a detail trap.	A passage about rising grocery prices and budget tips for families supports the idea 'families need smarter food budgeting'.
2	Supporting Details	Details are the specific facts, examples, and data that build the main idea. The GED asks you to identify which detail supports a stated claim.	Match the detail to the claim term-by-term: if the claim mentions a specific group, year, or direction, the right detail mirrors it.	To support 'sales fell after the price rise', you need data showing sales dropping after the price changed.
3	Author's Purpose	Purpose = why the passage exists: to inform, persuade, entertain, explain, or describe. The GED asks you to name the primary purpose.	Purpose answers 'what does the author want the reader to take away?' - not just what the passage is about.	A passage that argues for longer library hours has the purpose 'to persuade'.
4	Author's Point of View & Tone	Point of view = the author's stance on the topic; tone = the attitude (skeptical, approving, neutral, concerned) shown by word choice.	Look for value words (should, clearly, disappointing) - they reveal the attitude even in factual writing.	Calling a proposal 'risky' reveals a cautious point of view.

5	Inference: Supported by Text	An inference is a conclusion NECESSARILY or most logically drawn from the text - not a guess and not outside knowledge.	The correct inference uses only information in the passage plus one safe step of logic. If an option needs outside facts, it is wrong.	Text says a town's well 'has not refilled since 2005' - you can infer the town depends on a shrinking water source.
6	Drawing Conclusions	A conclusion is a logical extension of the evidence presented - staying inside the passage's scope and the tested range.	The strongest conclusion stays within what the passage states; avoid overgeneralizing to new groups or causes.	A study showing a drug helps only mice supports 'the drug affects mice', not 'the drug cures human disease'.
7	Text Structure & Organization	How the passage is built: cause-effect, compare-contrast, chronological, problem-solution, claim-evidence, question-answer.	The structure is usually visible in the first sentence, transitions, and the order of paragraphs.	A passage that poses 'why do bees dance?' then answers it with studies is a question-answer structure.
8	Sequencing Events	Arranging events in time order. Questions ask what happened first, next, or last, or which step precedes another.	Look for time markers (after, before, then, meanwhile, finally) and cause-chain words (because, as a result).	'She woke, made coffee, then left for work' - making coffee happened before leaving.
9	Cause & Effect Relationships	Trace which event caused which. The GED asks which statement correctly identifies a causal relationship described in the text.	Check direction: does the text say A caused B or B caused A? Correlations are not automatically causes.	'Heavy rain caused the landslide' - the rain must come FIRST and trigger the slide.
10	Compare & Contrast	Identifying similarities and differences between two people, events, or texts - often tested on paired passages.	Ask 'what is the same?' and 'what is different?' separately; a compare-contrast answer names both sides.	Two passages about the same law: one praises it, one warns about costs - they differ in tone and emphasis.

11	Fact vs Opinion	A fact is verifiable; an opinion is a judgment or preference. Passages blend both; questions ask you to tell them apart.	Value words (best, worst, should, clearly) signal opinion even inside factual writing.	'The city has 1.4M residents' (fact) vs 'the city is overcrowded' (opinion).
12	Word Choice / Connotation	Connotation is the emotional weight a word carries beyond its literal meaning: 'slim', 'thin', and 'scrawny' differ sharply in tone.	Ask whether the author approves, disapproves, or stays neutral, and match the word's effect to that attitude.	'Cheap' vs 'inexpensive' - 'cheap' can imply low quality.
13	Vocabulary in Context	Choose the meaning of a word as it is USED in the sentence - not just the dictionary definition.	Substitute each answer choice into the sentence; only the one that fits the exact context works.	In 'the plan was sound', 'sound' means 'valid or reliable', not 'noise'.
14	Figurative Language	Similes (like/as), metaphors (direct comparison), personification, and idioms express ideas imaginatively rather than literally.	When a question asks what a metaphor 'means', translate it into plain language: the comparison reveals a trait.	'The new policy was a bandage on a broken leg' = it was a temporary fix for a deep problem.
15	Literary Elements: Plot & Setting	Plot = the sequence of events (exposition, rising action, climax, resolution). Setting = where and when the story happens, which shapes mood and conflict.	Name the story's turning point (climax) to answer most plot questions; connect setting details to the mood they create.	A story set in a stormy, isolated cabin likely builds tension and isolation.

16	Character Analysis	Characters are revealed through their actions, words, thoughts, and what others say about them. Questions ask about motivation or change over time.	Use the EVIDENCE of the character's actions - the question's answer must be shown in the text, not assumed.	A character who volunteers to help neighbors at her own cost is revealed as generous and responsible.
17	Point of View: Narrative	First person (I), second person (you), and third person (he/she) points of view determine whose thoughts the reader can access.	Look at the pronouns and whose inner thoughts are shown to identify the narrative point of view.	'I had always feared the water' = first person; the reader is inside the narrator's mind.
18	Textual Evidence	Which line or fact best supports a claim or conclusion. The evidence must contain the specific fact the claim depends on.	Skim for the option naming the SAME variables as the claim - general statements rarely support specific claims.	A claim about 'migratory timing shifting earlier' needs an excerpt with actual earlier dates in it.

Section 2: RLA - Writing & the Extended Response (16 Concepts)

Grammar, usage, and sentence structure questions, plus the 45-minute extended response: read two source texts, argue with evidence, and score on 3 traits (argument & evidence, organization, conventions) double-weighted.

#	Term	Key Facts	GED Tip	Example
1	Subject-Verb Agreement	The verb must match its subject in number. Ignore interrupting phrases between them.	Cross out the interrupting phrase and match the verb to the REAL subject. '-s' on the verb = singular.	The box of books (is/are) heavy -& 'box' is the subject -& 'is'.
2	Pronoun-Antecedent Agreement	A pronoun agrees with its antecedent (the noun it replaces) in number, gender, and person. 'Each', 'everyone', 'anybody' are singular.	Words ending in -one, -body, or -thing are singular antecedents: 'Everyone brought his or her book'.	Each of the girls brought (her/their) own lunch -& 'her'.
3	Pronoun Case	Subject pronouns (I, he, she, we, they, who) act; object pronouns (me, him, her, us, them, whom) receive.	Test by isolating the pronoun: 'John and (I/me) went' -& 'I went' works -& 'I'.	Between you and (I/me) -& 'me' (object of the preposition).
4	Verb Tense Consistency	Verbs in a sentence or paragraph stay in consistent tenses unless time actually shifts.	Match tense to time markers: 'yesterday' = past, 'now' = present, 'tomorrow' = future.	'She runs every day and (ran/run) every day last summer' -& 'ran'.
5	Sentence Fragments	A fragment is a piece punctuated as a sentence - missing a subject, a verb, or starting with a subordinator and no main clause.	Every complete sentence has a subject AND a verb and can stand alone. 'Because the train was late' is a fragment.	Fragment: 'Although she studied.' Fixed: 'Although she studied, she was still nervous.'

6	Run-Ons & Comma Splices	A run-on joins two sentences with no punctuation; a comma splice joins them with only a comma.	Two full sentences need a period, a semicolon, or a comma + a conjunction (and, but, or, so).	'It rained, we stayed inside' -> 'It rained, so we stayed inside.'
7	Comma Rules	Commas separate list items, join two independent clauses with a conjunction, set off nonessential info, and follow introductory phrases.	Comma + conjunction = two full sentences joined. No comma between subject and verb - ever.	'After dinner, we walked.' 'The tall, dark building.'
8	Semicolons & Colons	A semicolon joins two related independent clauses. A colon introduces a list or explanation after a complete sentence.	Both sides of a semicolon must be full sentences; a colon follows a complete sentence.	'The plan was simple: work hard, sleep well.' 'She won; nobody was surprised.'
9	Apostrophes: Possessives & Contractions	Apostrophes show possession (the dog's toy; the students' books) and mark contractions (don't, it's). Do not use them for plurals.	'Its' = possessive (no apostrophe); 'it's' = it is. That rule settles most apostrophe questions.	'It's raining, and its paw is wet.'
10	Parallel Structure	Items in a list or pair use the same grammatical form: all nouns, all gerunds, all infinitive phrases.	If one list item starts with '-ing', they all should.	'She enjoys hiking, biking, and (to swim/swimming)' -> 'swimming'.
11	Modifiers & Dangling Modifiers	A modifier must clearly attach to the word it describes; a dangling modifier has nothing to modify.	The noun right after a comma-introduced phrase must be the thing being described.	Dangling: 'Running late, the bus was missed.' Fixed: 'Running late, she missed the bus.'
12	Commonly Confused Words	Their/there/they're, its/it's, your/you're, whose/who's,		

affect/effect,
then/than,
to/too/two,
lose/loose.

Learn the
repeating pairs:
affect (verb) /
effect (noun);

then (time) / than
(comparison).

'The rain affected
the game; its
effect was a
delay.'

13	Transitional Words & Logical Flow	Transitions signal logic: however (contrast), moreover (add), therefore (result), for example (illustrate), in conclusion (summarize).	The transition must match the relationship between the two sentences it connects.	'The plan is costly. (However/Therefore), it will pay for itself' -> 'However'.
14	Extended Response: Task & Purpose	You get 45 minutes to read TWO source texts and write an argument that uses evidence from them. The prompt asks you to decide which source's argument is stronger, or to make and defend your own claim.	Spend ~8-10 minutes reading and planning: underline each source's claim and its strongest evidence BEFORE you write.	Plan: intro with your claim, 2-3 body paragraphs each using one piece of evidence, conclusion restating your claim.
15	Extended Response: Argument & Evidence (Trait 1)	Trait 1 (0-2) scores whether you create a text-based argument, cite RELEVANT evidence from the sources, and analyze the arguments (e.g., spotting unsupported claims).	Quote or paraphrase specific evidence from the source texts in EVERY body paragraph - the trait rewards cited, relevant evidence.	Weak: 'The letter makes good points.' Strong: 'The letter cites the 2023 water report showing a 40% drop, which directly supports its claim.'
16	Extended Response: Organization (Trait 2)	Trait 2 (0-2) scores development of ideas, a logical progression, transitions, and formal tone.	One paragraph = one idea; open each body paragraph with a transition; keep a formal, objective tone.	Structure: intro (claim) -> body 1 (strongest evidence) -> body 2 (second evidence + counter) -> conclusion.

Section 3: Math - Numbers & Operations (20 Concepts)

Mathematical Reasoning, 115 min, 2 parts (Part 1: no calculator; Part 2: TI-30XS + formula sheet). About 45% of the test is quantitative problem solving - rational numbers, order of operations, percents, and real-life measurements.

#	Term	Key Facts	GED Tip	Example
1	Integers & Absolute Value	Integers are whole numbers and their negatives. Absolute value, written $\text{abs}(x)$, is distance from zero - always non-negative.	Distance from zero: $\text{abs}(-7) = 7$. Negative x negative = positive.	$\text{abs}(-5) = 5$; $(-2) \times (-3) = 6$.
2	Order of Operations	Solve in order: Parentheses, Exponents, Multiply/Divide (left to right), Add/Subtract (left to right).	PEMDAS: do multiplication/division together left-to-right, then addition/subtraction left-to-right.	$3 + 6 \times 2 = 3 + 12 = 15$, not 18. $(3 + 6) \times 2 = 18$.
3	Factors & Multiples	Factors divide a number evenly; multiples are products of the number with integers. GCF = largest common factor; LCM = smallest common multiple.	List factors of each number for GCF; for LCM, use the largest shared multiple or prime factorization.	GCF(12, 18) = 6; LCM(4, 6) = 12.
4	Prime Numbers & Prime Factorization	A prime has exactly two factors: 1 and itself (2, 3, 5, 7, 11...). Every composite number breaks into a unique product of primes.	Break numbers down by dividing by the smallest primes, then multiply your primes back to check.	$60 = 2 \times 2 \times 3 \times 5 = 2^2 \times 3 \times 5$.
5	Fractions: Add & Subtract	Find a common denominator, add/subtract the numerators, keep the		

denominator,
then simplify.

The shortcut: a/b $\pm c/d = (ad \pm$ $cb)/(bd)$, then reduce.	$1/4 + 1/6 = 3/12$ $+ 2/12 = 5/12.$
--	--

6	Fractions: Multiply & Divide	Multiply straight across (top x top, bottom x bottom); divide by multiplying by the reciprocal (flip the second fraction).	For division, flip ONLY the second fraction (the divisor) and multiply.	$2/3 \times 4/5 = 8/15$; $2/3$ divided by $4/5 = 2/3 \times 5/4 = 10/12 = 5/6$.
7	Decimals: Place Value & Operations	Place value names tenths, hundredths, thousandths. Add/subtract by lining up decimal points; multiply normally then count decimal places.	Line up the DECIMAL POINTS before adding or subtracting - the most common trap is misalignment.	$0.75 + 0.125 = 0.875$; $0.2 \times 0.3 = 0.06$.
8	Decimals & Fractions Conversions	Fractions to decimals: divide top by bottom. Decimals to fractions: write over the place value, then simplify. Terminating decimals and repeating decimals both convert.	Memorize: $1/2 = 0.5$, $1/4 = 0.25$, $1/5 = 0.2$, $3/4 = 0.75$, $1/3 = 0.333$.	$0.75 = 75/100 = 3/4$; $1/8 = 0.125$.
9	Ratios	A ratio compares two quantities (3:2 or $3/2$). It is a comparison, not a count - the total is the sum of the parts.	Part-to-part ratios split the whole into (sum of parts) equal pieces.	If boys:girls = 3:2, there are 5 parts total; boys are $3/5$ of the group.
10	Proportions	A proportion sets two ratios equal ($a/b = c/d$) and solves by cross-multiplying ($a \times d = b \times c$).	Set up both sides with the SAME units in the same position, then cross-multiply.	3 apples cost \$1.80 -> $3/1.8 = 7/x$ -> $x = \$4.20$.
11	Unit Rates	A unit rate is a ratio with denominator 1: miles per hour, price per item, pages per minute.	Divide the first quantity by the second and label the result with the units.	12 eggs cost \$3 -> $\$3/12 = \0.25 per egg.

12	Percent Basics	Percent = parts per 100. To convert: percent to decimal (divide by 100), decimal to percent (multiply by 100).	'Percent of' = multiply: 15% of 200 = $0.15 \times 200 = 30$.	$75\% = 0.75 = \frac{3}{4}$; $0.08 = 8\%$.
13	Percent Increase & Decrease	Percent change = $(\text{new} - \text{original}) / \text{original} \times 100\%$. A discount and a tax both use percent of the original price.	The change is relative to the ORIGINAL value, not the new one.	\$80 item on 25% off: $80 \times 0.75 = \$60$; then 5% tax: $60 \times 1.05 = \$63$.
14	Discounts & Markups	Discount = percent off the price (sale price = price $\times$ (1 - discount rate)). Markup = percent added to the cost (selling price = cost $\times$ (1 + markup rate)).	Write the multiplier: '30% off' = multiply by 0.70; '20% markup' = multiply by 1.20.	\$50 shirt at 30% off = $50 \times 0.70 = \$35$.
15	Exponents: Basics	Exponents are repeated multiplication: $2^3 = 2 \times 2 \times 2 = 8$. Any number to the zero power = 1. Negative exponents mean reciprocals: $2^{-3} = \frac{1}{8}$.	Multiply exponents when raising a power to a power: $(a^m)^n = a^{(m \times n)}$.	$3^4 = 81$; $5^0 = 1$; $10^{-2} = 0.01$.
16	Square Roots & Cube Roots	The square root of a number is its non-negative square root: $\sqrt{25} = 5$. Cube root: the number that cubed gives the value.	Perfect squares to know: 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144.	$\sqrt{144} = 12$; $\sqrt[3]{27} = 3$ (since $3^3 = 27$).
17	Estimation & Rounding	Round to a given place value (nearest tenth, nearest dollar) and estimate to check reasonableness		

of answers.

On the
no-calculator
part, estimate
first to eliminate
impossible
answer choices.

7.94×3.08 is
about $8 \times 3 = 24$;
the exact answer
is near 24.4.

18	Scientific Notation	A compact way to write very large or small numbers: $a \times 10^n$ where $-10 < a < 10$ and n is an integer.	Moving the decimal point right = positive exponent; left = negative exponent.	$0.00034 = 3.4 \times 10^{-4}$; $5,200,000 = 5.2 \times 10^6$.
19	Real Numbers & Number Lines	Real numbers include rational numbers (fractions/decimals) and irrational numbers (like $\sqrt{2}$, π - non-repeating decimals). Number lines order them.	Locate a value on a number line by comparing it to benchmarks (0, 1, $\frac{1}{2}$).	$\sqrt{2}$ is between 1 and 2 (about 1.414) - it is irrational.
20	Word Problems: Translation	'is' = =, 'of' = multiply, 'more than' = +, 'less than' = -, 'per' = divide, 'a number' = x . Write the equation BEFORE solving.	Define the variable with a label; one sentence = one equation often.	'Twice a number minus 5 is 9' -> $2x - 5 = 9$ -> $x = 7$.

Section 4: Math - Algebra, Expressions & Equations (20 Concepts)

About 55% of the GED Math test is algebraic problem solving: expressions, linear equations and inequalities, systems, functions, and slopes. The formula sheet gives key formulas - the skill is knowing which one to apply.

#	Term	Key Facts	GED Tip	Example
1	Algebraic Expressions	An expression is a combination of numbers, variables, and operations ($3x + 5$). Evaluate it by substituting a value for the variable.	Substitute carefully: $3x + 5$ with $x = 4$ gives $3(4) + 5 = 17$.	Evaluate $2x^2 - 1$ when $x = 3$: $2(9) - 1 = 17$.
2	Combining Like Terms	Like terms have the same variable and exponent: $3x + 5x = 8x$, but $3x^2 + 5x$ stays separate.	Add only the coefficients of like terms; keep the variable part unchanged.	$3x + 2y - x + 5y = 2x + 7y$.
3	The Distributive Property	$a(b + c) = ab + ac$. Distribute the outside factor to EVERY term inside the parentheses.	Watch signs: $-2(x - 3) = -2x + 6$ (the minus flips both terms' signs).	$3(2x + 4) = 6x + 12$.
4	Solving Linear Equations	Isolate the variable: undo addition/subtraction first, then multiplication/division, doing the same to both sides.	Whatever you do to one side, do to the other. Keep the equation balanced.	$3x + 5 = 20$ -> $3x = 15$ -> $x = 5$.
5	Linear Equations with Fractions	Clear fractions by multiplying BOTH sides by the common denominator, then solve normally.	Multiplying both sides by the denominator eliminates fractions in one step.	$x/3 + 2 = 4$ -> multiply by 3: $x + 6 = 12$ -> $x = 6$.
6	Linear Inequalities	Inequalities solve like equations, BUT multiplying or dividing by a negative FLIPS		

the inequality
symbol.

The flip is the
whole test: $-2x$
 > 6 $\rightarrow x < -3$.

$-3x + 6 \leq 12$
 $\rightarrow -3x \leq 6$
 $\rightarrow x \geq -2$.

7	Graphing Inequalities	A one-variable inequality graphs on a number line: open circle for $<$ or $>$; closed circle for $\leq$ or $\geq$; shade the solution side.	Test a point (like 0) to see which side of the boundary is the solution.	$x < -2$: open circle at -2, arrow shading to the left.
8	Systems of Equations	Two equations, two unknowns. Solve by substitution (isolate one variable) or elimination (add/subtract equations to cancel a variable).	Elimination is fastest when coefficients line up; substitution when one equation is solved for a variable.	$x + y = 10$; $x - y = 2$ -> add: $2x = 12$ -> $x = 6$, $y = 4$.
9	Number of Solutions to a System	One solution = lines intersect; no solution = parallel lines (same slope); infinite solutions = same line.	Compare slopes and intercepts - equal slopes with different intercepts means no solution.	$y = 2x + 1$ and $y = 2x + 5$: no solution (parallel).
10	Word Problems: Two Variables	Define TWO variables, write TWO equations from the sentences, then solve the system.	One sentence gives one equation; label each variable so you can write both.	'A store sold 100 tickets: adult \$8, child \$5, total \$620' -> $a + c = 100$; $8a + 5c = 620$.
11	Slope of a Line	Slope = rise/run = change in y / change in x = $(y_2 - y_1)/(x_2 - x_1)$. The formula sheet gives this.	Rise over run between two points: subtract y's over subtract x's, keeping the SAME order.	Through (1, 2) and (4, 8): $m = (8-2)/(4-1) = 2$.
12	Slope-Intercept Form	$y = mx + b$: m = slope, b = y-intercept (where the line crosses the y-axis).	Read both directly from the equation: $y = 3x - 7$ has slope 3 and y-intercept -7.	$y = -2x + 5$: slope -2, y-intercept 5.
13	Interpreting Slope & Intercept in Context	In word problems, slope = the rate (dollars per hour, per item); y-intercept = the starting value		

(fixed fee, initial amount).

The slope's units are (y-units)/(x-units) - say them out loud to check.	$y = 30x + 100$ (cost of a service): \$30 per item plus a \$100 setup fee.
---	---

14	Find x & y Intercepts	The y-intercept is where $x = 0$; the x-intercept is where $y = 0$.	Set the other variable to zero and solve.	$3x + 6y = 12$: x-intercept (4, 0), y-intercept (0, 2).
15	Graphing Linear Equations	Plot the y-intercept, use the slope to find a second point (rise/run), then draw the line through both.	Or find three points by plugging in x-values - the check catches arithmetic errors.	$y = 2x - 1$: points (0,-1), (1,1), (2,3) lie on the line.
16	Parallel & Perpendicular Lines	Parallel lines have equal slopes; perpendicular lines have slopes that are negative reciprocals (m and $-1/m$).	Check slopes, never y-intercepts: same slope = parallel; product of slopes = -1 = perpendicular.	$y = 2x + 1$ and $y = 2x - 4$ are parallel; $y = -0.5x$ is perpendicular to both.
17	Function Notation	$f(x) = mx + b$ is the function form of a line. $f(3)$ means 'plug in 3 for x'; $f(a) = b$ means the point (a, b) is on the graph.	Evaluate by substituting: $f(2) = 3(2) - 7 = -1$.	If $f(x) = 2x + 3$, then $f(4) = 11$.
18	Domain & Range	Domain = the set of valid inputs (x-values); range = the set of outputs (y-values). Context often restricts both.	In word problems, inputs are often whole numbers (number of items, people) - so $x \geq 0$.	A rental costs $5 + 2x$ for x days: domain $x = 0, 1, 2, \dots$ (whole days only).
19	Quadratic Basics: Factoring	$x^2 + bx + c$ factors into $(x + p)(x + q)$ where $p + q = b$ and $p \times q = c$.	Find the pair that multiplies to c and adds to b.	$x^2 - 5x + 6 = (x - 2)(x - 3)$.
20	Quadratic Basics: Solving by Setting to Zero	To solve a quadratic, set it equal to zero, factor (or use the quadratic formula from the formula sheet), and solve each factor = 0.	The solutions are where the parabola crosses the x-axis - the roots.	$x^2 - 5x + 6 = 0$ $\Rightarrow (x - 2)(x - 3) = 0$ $\Rightarrow x = 2$ or $x = 3$.

Section 5: Math - Geometry & Measurement (16 Concepts)

Area, perimeter, volume, angles, the Pythagorean theorem, and coordinate geometry. The GED provides a formula sheet - know which formula to apply, and watch the units.

#	Term	Key Facts	GED Tip	Example
1	Perimeter & Circumference	Perimeter = distance around a polygon (sum of sides). Circumference = distance around a circle: $C = 2 \times \pi \times r = \pi \times d$ (formula sheet gives it; $\pi \approx 3.14$).	Add every side for perimeter; for circles use the circumference formula, not the area formula.	Rectangle 4 x 6: perimeter = $2(4) + 2(6) = 20$. Circle $r = 3$: $C = 2 \times 3.14 \times 3 = 18.84$.
2	Area: Rectangles & Squares	Area of a rectangle = length x width; square = side x side. Units are square units.	Both are 'base times height' - the side perpendicular to the base.	Rectangle 4 x 6: $A = 24$ square units.
3	Area: Triangles & Parallelograms	Triangle area = $\frac{1}{2} \times \text{base} \times \text{height}$; parallelogram = base x height. The height is PERPENDICULAR to the base.	The $\frac{1}{2}$ in the triangle formula is the only difference from a parallelogram - don't forget it.	Triangle base 6, height 4: $A = \frac{1}{2} \times 6 \times 4 = 12$.
4	Area: Trapezoids	Trapezoid area = $\frac{1}{2} \times h \times (b_1 + b_2)$: half the height times the SUM of the two bases.	The formula sheet gives it; plug the parallel bases in as b_1 and b_2 .	Bases 4 and 10, height 5: $A = \frac{1}{2} \times 5 \times 14 = 35$.
5	Area & Circumference of Circles	Circle area = $\pi \times r^2$; circumference = $2 \times \pi \times r$ (or $\pi \times d$).	Area uses the SQUARED radius; circumference uses the radius once.	Circle $r = 4$: $A = 3.14 \times 16 = 50.24$; $C = 2 \times 3.14 \times 4 = 25.12$.
6	The Pythagorean Theorem	For a right triangle: $a^2 + b^2 = c^2$, where c is the hypotenuse (opposite the		

right angle).

Identify the
hypotenuse
FIRST; the legs
can be either a
or b.

Legs 6 and 8: $36 + 64 = 100$ ->
 $c = 10$.

7	Special Triangles	A 3-4-5 right triangle and its multiples (6-8-10, 9-12-15) are common. 45-45-90 has legs equal with hypotenuse = leg $\times \sqrt{2}$.	Recognizing 3-4-5 and 5-12-13 triples lets you skip the math.	Legs 6 and 8 > hypotenuse 10 (3-4-5 doubled).
8	Angles: On a Line & Around a Point	Angles on a straight line sum to 180; angles around a point sum to 360. Vertical angles (across an X) are equal.	Mark the diagram: across an X = equal; on a straight line = supplementary (sum 180).	An angle of 40 is supplementary to 140 on a straight line.
9	Parallel Lines & Transversals	A line crossing parallel lines creates equal corresponding angles and equal alternate interior angles (the Z shape).	Look for the Z shape: alternate interior angles are equal.	With parallel lines, the angle matching the given 70-degree angle is also 70.
10	Volume: Prisms & Cylinders	Volume = base area $\times$ height. For a rectangular prism: $V = lwh$. For a cylinder: $V = \pi \times r^2 \times h$ (formula sheet).	Find the base area FIRST, then multiply by the height.	Cylinder $r = 3$, $h = 5$: $V = 3.14 \times 9 \times 5 = 141.3$.
11	Volume: Pyramids, Cones & Spheres	Pyramid/cone volume = $\frac{1}{3} \times$ base area $\times$ height. Sphere volume = $\frac{4}{3} \times \pi \times r^3$.	The $\frac{1}{3}$ factor separates pyramids/cones from prisms/cylinders - the formula sheet gives it.	Cone base area 12, height 6: $V = \frac{1}{3} \times 12 \times 6 = 24$.
12	Surface Area	Surface area = the sum of the areas of all faces. Rectangular prism: $SA = 2lw + 2lh + 2wh$ (formula sheet).	Unfold the shape in your head; count every face once. Use the formula sheet's prism formulas.	Cube with edge 3: $SA = 6 \times 9 = 54$.
13	Coordinate Plane: Points & Distance	Points are (x, y): x is horizontal, y is vertical. Distance between points		

uses the
Pythagorean
theorem over the
x and y
differences.

Draw a right
triangle between
the two points;
the distance is
the hypotenuse.

From (1, 1) to (4,
5): distance =
 $\sqrt{9 + 16} = 5$.

14	Coordinate Plane: Midpoint	The midpoint of two points is the average of the x's and the average of the y's: $((x_1 + x_2)/2, (y_1 + y_2)/2)$.	Average the coordinates - that is the middle point's location.	Midpoint of (2, 4) and (6, 10) = (4, 7).
15	Transformations on the Grid	Translations slide a figure; reflections flip it across a line; rotations turn it; dilations resize it about a center.	Track one vertex to see how the whole figure moves; reflections flip the sign of one coordinate across the axis.	Reflecting (2, 3) across the x-axis gives (2, -3).
16	Scale Factor: Area & Volume	If linear dimensions scale by k, area scales by k^2 and volume by k^3 .	Square the scale factor for area; cube it for volume.	Doubling a cube's edge ($k = 2$) multiplies its volume by 8.

Section 6: Math - Data, Statistics & Probability (12 Concepts)

Mean/median/range, graphs, scatterplots, and probability. The formula sheet defines mean and median; the skill is reading the data and the question's wording.

#	Term	Key Facts	GED Tip	Example
1	Mean, Median, Mode & Range	Mean = sum/count. Median = middle value of sorted data (mean of two middles for even counts). Mode = most frequent value. Range = max - min (formula sheet).	Median NEEDS sorted data; the mean is pulled by outliers, the median is not.	Data 2, 3, 7, 10, 13: mean 7, median 7, range 11.
2	Choosing the Right Measure	The mean is affected by extreme values; the median resists them; the mode suits 'most common' questions.	If a question mentions an unusually large outlier, expect the median to be the better description.	House prices with one mansion: the median describes typical homes better than the mean.
3	Reading Bar Graphs & Tables	Bars and tables show categories with values. Read the axis labels and the category of the bar you need.	Quote the exact bar/row you need before choosing - never answer from memory of the chart.	A bar of 40 for 2019 and 60 for 2020 shows a +20 increase (and +50% growth).
4	Reading Line Graphs & Trends	Line graphs show change over time. A trend is the overall direction: increasing, decreasing, stable, or cyclical.	Describe the big direction, not a single point - the trend is the shape of the whole line.	A line climbing every year 2015-2024 shows an increasing trend despite one small dip.
5	Pie Charts & Percentages	Pie charts show parts of a whole; each slice's angle or percent sums with the others to 100% (or 360 degrees).	To find a slice's value, multiply the whole by the slice's percent.	A \$1,200 budget with 25% 'housing' -> housing = \$300.

6	Scatterplots & Best-Fit Lines	Scatterplots show two variables per point. A best-fit line summarizes the trend: positive, negative, or no association.	Use the LINE, not the scattered points, to estimate the typical y for a given x.	Hours studied (x) vs score (y) rising together = positive association.
7	Line of Best Fit: Prediction	To predict with a best-fit line, find the x-value on the line and read the y-value - interpolating inside the data range.	Only predict INSIDE the data range; extending beyond it is risky.	Best-fit $y = 2x + 1$ at $x = 5$ estimates $y = 11$ even if the data point there is 12.
8	Sampling & Bias	A representative sample is random and large enough to stand in for the population. Bias comes from convenience samples or leading questions.	The flaw in a survey's conclusion is usually a non-representative sample.	Surveying only mall shoppers to measure national preferences is biased toward shoppers.
9	Probability: Single Event	$P(\text{event}) = \frac{\text{favorable outcomes}}{\text{total outcomes}}$, always between 0 and 1.	Count the TOTAL outcomes carefully - the denominator is all possibilities.	A bag with 3 red and 5 blue marbles: $P(\text{red}) = \frac{3}{8}$.
10	Probability: Two Events	$P(A \text{ and } B) = P(A) \times P(B)$ for independent events. $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$.	'And' multiplies (independent); 'or' adds then subtracts the overlap.	$P(\text{red then red WITH replacement}) = (\frac{3}{8})^2$; without = $(\frac{3}{8})(\frac{2}{7})$.
11	Counting: Combinations & Permutations	Permutations count ordered arrangements; combinations count selections where order does not matter.	Ask 'does order matter?' - committees = combinations; codes = permutations.	Choosing 2 of 5 for a committee: 10 ways. Arranging 2 of 5 in order: 20 ways.
12	Interpreting Data to Support Claims	Questions give a claim and ask which data (in a table or graph) supports or		

contradicts it.

The supporting
data must be
TRUE of the
graphic and
match the claim's

direction.

Claim 'sales
recovered after
2020' needs the
graph's
post-2020 points

rising again.

Section 7: Science - Life Science (18 Concepts)

Science test is 90 minutes and covers life science, physical science, and earth/space science. It emphasizes reasoning with data, experiments, and evidence - not memorizing facts.

#	Term	Key Facts	GED Tip	Example
1	Cell Structure & Organelles	Cells are the basic unit of life. Key organelles: nucleus (DNA/control), mitochondria (energy), ribosomes (protein), cell membrane (gatekeeper), chloroplasts (photosynthesis, in plants).	Match organelle to JOB: energy = mitochondria; control = nucleus; photosynthesis = chloroplast.	Mitochondria are called the 'powerhouses' because they make ATP.
2	Cell Division: Mitosis vs Meiosis	Mitosis makes 2 identical body cells (growth/repair). Meiosis makes 4 genetically different sex cells with half the chromosomes.	Mitosis = same (clone); meiosis = sex cells (sperm/egg) with half the DNA.	Skin healing uses mitosis; egg and sperm formation uses meiosis.
3	Photosynthesis & Cellular Respiration	Photosynthesis (plants): CO ₂ + water + sunlight → glucose + oxygen. Respiration (all life): glucose + oxygen → CO ₂ + water + energy (ATP).	They are opposites: photosynthesis stores energy from sunlight; respiration releases it.	Plants make glucose in the day (light) and respire glucose around the clock.
4	DNA, Genes & Chromosomes	DNA holds hereditary information in genes; a gene codes for a trait. Chromosomes are coiled DNA; humans have 46 (23 pairs).	A gene = a unit of heredity; almost every cell has the full DNA set, but cells use different genes.	Eye color comes from genes; each parent contributes one copy of each gene.

5	Mendelian Inheritance	Dominant alleles (B) show even with one copy; recessive alleles (b) need two copies (bb). A Punnett square predicts offspring ratios.	Predict by Punnett square: Bb x Bb -> 3:1 phenotype ratio (75% dominant-trait).	If B = brown and b = blue, Bb x Bb gives 25% bb = blue-eyed offspring.
6	Traits: Genotype vs Phenotype	Genotype = the allele pair (BB, Bb, bb). Phenotype = the visible trait (brown eyes).	Phenotype = what you SEE; genotype = what you carry.	A Bb plant looks tall (phenotype) but carries a short allele (genotype).
7	Evolution by Natural Selection	Individuals vary; more offspring are produced than survive; those best suited to the environment survive and reproduce, passing on their traits.	Natural selection acts on EXISTING variation - it does not create new traits on demand.	Darker moths survived pollution-darkened trees and became more common.
8	Adaptation & Survival	An adaptation is a heritable trait that improves survival/reproduction in a specific environment (- e.g., thick fur in cold climates).	Adaptations fit the ENVIRONMENT; a trait that helps in one habitat may hurt in another.	Cacti's water-storing stems are an adaptation to deserts.
9	Ecosystems & Food Chains	Producers (plants) make food; consumers eat it; decomposers recycle matter. Energy flows one way and is lost as heat at each level.	Energy decreases at each food-chain level (about 90% lost); matter (carbon, nitrogen) cycles.	Sun -> grass (producer) -> rabbit (consumer) -> fox: energy decreases up the chain.
10	Carrying Capacity & Limiting Factors	Carrying capacity = the largest population an environment can support. Food, water, space, and disease are limiting factors.	A population levels off near carrying capacity when resources run low.	A deer herd stops growing when food becomes scarce in winter.

11	Biomes & Ecosystems	Biomes are large climate regions with characteristic life: tundra, taiga, desert, grassland, tropical rainforest, temperate forest, aquatic.	Match biome to climate + vegetation: hot/wet = rainforest; dry = desert; cold = tundra.	A biome with permafrost and no trees is the tundra.
12	Body Systems Overview	Circulatory (heart, blood, oxygen transport), respiratory (lungs), digestive (breakdown of food), nervous (signals), skeletal/muscular (support, movement), immune (defense).	Match system to function: transport = circulatory; gas exchange = respiratory; control = nervous.	Oxygen moves from lungs (respiratory) into blood (circulatory) - systems work together.
13	Homeostasis	Homeostasis is the body's ability to keep internal conditions stable (temperature, blood sugar, pH) despite outside changes.	A response that BRINGS a value back to normal = homeostasis.	Sweating when hot cools the body back to ~98.6 F - homeostasis.
14	Health & Disease	Diseases spread by pathogens (viruses, bacteria) and by lifestyle/genetic factors. Vaccines and hygiene reduce spread.	Separate cause from symptom: a virus causes the flu; fever is a symptom, not the cause.	Washing hands breaks the transmission route of many pathogens.
15	Scientific Method & Variables	Hypothesis -> experiment -> data -> conclusion. Independent variable = what you change; dependent = what you measure; control = kept constant.	The INDEPENDENT variable is manipulated; the DEPENDENT variable is measured - tell them apart by which one changes first.	Testing fertilizer: fertilizer amount = independent; plant height = dependent.

16	Interpreting Experiments	A good experiment changes ONE variable and uses a control group to isolate the cause. Conclusions must stay inside what was tested.	A control group answers 'compared to what?' - without it, the cause is unclear.	Plants with fertilizer grew 20% more than the control group -> the fertilizer caused the gain (within tested conditions).
17	Reading Graphs in Science	Science questions often show data as tables or graphs; read the axes and the relationship (direct, inverse, none).	Name the relationship in words: 'as x increases, y increases (direct)' before choosing.	A graph of light vs growth rising steadily shows a direct relationship between light and growth.
18	Evidence & Conclusions in Science	The best conclusion is the one the EVIDENCE supports - not the broadest or most exciting statement.	Stay inside the tested range and the measured variables; avoid overgeneralizing.	Data showing a drug helps mice supports 'the drug affected mice' - not 'the drug cures humans'.

Section 8: Science - Physical & Earth/Space Science (18 Concepts)

Atoms, matter, energy, forces, waves, and the Earth/space systems that appear on the 90-minute Science test. Again: reasoning and applications beat memorization.

#	Term	Key Facts	GED Tip	Example
1	States of Matter	Solid (fixed shape/volume), liquid (fixed volume, takes container shape), gas (fills container). Changes: melting, freezing, boiling, condensing, sublimation.	Shape vs volume tells you the state: fixed shape = solid; none = gas.	Ice melting is a phase change (solid to liquid), not a chemical change.
2	Physical vs Chemical Changes	Physical changes alter form but not substance (cutting, melting, dissolving). Chemical changes make new substances (burning, rusting, digesting).	Ask 'is a NEW substance made?' - yes = chemical change.	Rusting iron is chemical; bending a spoon is physical.
3	Atoms & Subatomic Particles	Atoms have protons (+), neutrons (0) in the nucleus, and electrons (-) outside. Protons identify the element.	The atomic number = number of protons = identity of the element.	Carbon's atomic number 6 means 6 protons - that is what makes it carbon.
4	Elements, Compounds & Mixtures	Elements are single kinds of atoms. Compounds are two+ elements chemically bonded (H ₂ O). Mixtures are physically combined (air, salad).	Compounds have a fixed formula and new properties; mixtures keep the parts' properties.	Salt (NaCl) is a compound; salt dissolved in water is a mixture.

5	The Periodic Table	Columns (groups) share chemical behavior; rows are periods. Metals are on the left, nonmetals on the right.	Use the table's layout: elements in the same column react similarly.	Sodium and potassium (same group) both react violently with water.
6	Chemical Equations & Balancing	Reactants (left) & products (right). Mass is conserved: the same number of each atom must appear on both sides.	Balance by adjusting COEFFICIENTS, never subscripts.	$H_2 + O_2 \rightarrow H_2O$ balances as $2H_2 + O_2 \rightarrow 2H_2O$.
7	Acids & Bases	Acids release H^+ (pH < 7 ; sour; turn litmus red). Bases release OH^- (pH > 7 ; slippery; turn litmus blue). pH 7 is neutral.	pH scale: lower = more acidic, higher = more basic; each step is a 10x change.	Lemon juice (pH ~ 2) is acidic; baking soda (pH ~ 9) is basic.
8	Conservation of Mass & Energy	In ordinary changes, mass (and energy) are conserved - they are rearranged, not created or destroyed.	In a closed system, starting mass = ending mass - always.	Burning 10 g of wood produces about 10 g of ash + gases.
9	Atomic Structure & Isotopes (Basics)	Isotopes are the same element with different numbers of NEUTRONS (different mass). The electron arrangement drives bonding.	Isotopes change the mass, not the element identity (protons stay the same).	Carbon-12 and Carbon-14 are both carbon - C-14 just has 2 extra neutrons.
10	Energy Forms & Transformations	Energy can be kinetic (motion) or potential (stored). It transforms: chemical & thermal (burning), electrical & light (bulb), etc.	In transformations, energy is conserved - it changes form but does not disappear.	A falling ball converts potential energy into kinetic energy.

11	Newton's Laws of Motion	1st: objects keep moving unless a force acts. 2nd: $F = ma$ (force = mass x acceleration). 3rd: every action has an equal and opposite reaction.	$F = ma$ is the math they test - same force, more mass = less acceleration.	Rockets push gas down (action); gas pushes the rocket up (reaction).
12	Force & Gravity	Gravity pulls masses together; near Earth it accelerates falling objects at $\sim 9.8 \text{ m/s}^2$. Weight = mass x gravity.	Mass (kg) stays the same everywhere; weight (force) changes with gravity.	An astronaut's mass is identical on the Moon, but their weight is $\sim 1/6$ as much.
13	Work & Simple Machines	Work = force x distance ($W = Fd$). Simple machines (lever, pulley, inclined plane, wheel) trade force for distance to make work easier - they do not reduce the WORK, they reduce the FORCE needed.	Machines multiply input force, not total work - you push a longer distance but with less force.	A ramp lets you lift a heavy crate with less force over a longer distance.
14	Waves: Sound & Light	Waves carry energy. Sound is a compression wave needing a medium. Light is an electromagnetic wave that travels through a vacuum at the fastest speed.	Frequency = pitch (sound) / color (light); amplitude = loudness (sound) / brightness (light).	A high-frequency sound wave is high-pitched; a high-amplitude one is loud.
15	Electricity & Circuits	Current (amps) flows in a closed circuit. Voltage drives current; resistance opposes it (Ohm's law: $V = IR$). Series circuits share the		

path; parallel
circuits have
branches.

A circuit must be
CLOSED to
work; a switch
breaks the path.

Two bulbs in
parallel stay lit
independently; in
series, one
failure kills the
loop.

16	Earth's Structure & Layers	Earth has a crust, mantle, outer core (liquid), and inner core (solid). Plate tectonics drives earthquakes, volcanoes, and mountain building.	Convection in the mantle moves tectonic plates - that is the engine.	Earthquakes concentrate at plate boundaries where plates grind past each other.
17	The Water Cycle & Weather	Water cycles: evaporation, condensation, precipitation, collection. Weather is driven by temperature, pressure, and water.	The sun drives the water cycle; rising warm air = lower pressure = often storms.	Evaporation from oceans forms clouds that precipitate as rain.
18	Solar System & Space Basics	The Sun is the center; planets orbit in ellipses. Earth's tilt and orbit create seasons; the Moon's orbit creates phases and tides.	Seasons come from the Earth's AXIS TILT, not the distance from the Sun.	June's Northern Hemisphere summer happens because the North Pole tilts toward the Sun.

Section 9: Social Studies - Civics & Government (14 Concepts)

The Social Studies test is 70 minutes; roughly HALF of it is civics & government. Focus on the Constitution, the branches, rights, and how laws are made.

#	Term	Key Facts	GED Tip	Example
1	The Declaration of Independence	Declared the colonies independent from Britain (1776) and stated natural rights: life, liberty, and the pursuit of happiness. Government's power comes from the consent of the governed.	Know its ROLE: it justifies breaking away from Britain; the Constitution (later) is the framework of government.	'Governments derive their just powers from the consent of the governed.'
2	The U.S. Constitution	The supreme law of the land (1787). It creates the federal government, divides power among three branches, and lists the powers of the national government.	The Constitution = the RULES of government; the Declaration = the WHY.	Congress makes laws, the president enforces them, courts interpret them - all from the Constitution.
3	The Bill of Rights	The first TEN amendments protect individual rights: speech, religion, press, assembly (1st); bear arms (2nd); no forced self-incrimination (5th); rights in criminal trials (6th); no cruel punishment (8th).	Match rights to amendments: speech/religion = 1st; trial rights = 5th/6th; cruel punishment = 8th.	The 1st Amendment protects peaceful protest and a free press.
4	The Three Branches	Legislative (Congress - makes laws), Executive		

(president - enforces laws),
Judicial (courts - interprets laws).
The system of checks and balances keeps any branch from dominating.

Make-Enforce-Interpret: Congress makes, the president

enforces, courts
interpret.

The president
can veto a law
Congress
passed - a check

on the
legislature.

5	Checks & Balances	Each branch can limit the others: veto (executive over legislative), override a veto with 2/3 (legislative over executive), judicial review (judicial over both).	A 'check' is one branch stopping an action of another - name the two branches involved.	The Supreme Court declaring a law unconstitutional is an example of judicial review.
6	Federalism	Power is divided between the FEDERAL government (national concerns: defense, currency, interstate commerce) and STATE governments (education, roads, public safety).	Default split: national = the whole country; state = what happens inside the state.	Education is mostly a state responsibility; printing money is federal.
7	Amending the Constitution	An amendment needs 2/3 of both houses of Congress (or a convention), then ratification by 3/4 of the states.	Article V: propose (2/3 Congress) + ratify (3/4 states) - a high bar on purpose.	The 13th Amendment (abolishing slavery) was ratified by 3/4 of state legislatures.
8	How a Bill Becomes a Law	Introduced -> committee -> passes both houses of Congress -> signed by the president (or vetoed; Congress can override with 2/3) -> becomes law.	Remember the last hinge: president signs, vetoes, or lets it pass; Congress can override a veto.	Passed by the Senate and House, then signed by the president = law.
9	The Electoral College	The president is chosen by 538 electors, not by direct popular vote. Each state gets electors = its House seats +		

2 Senate seats; 270 wins.

270 votes to win; a candidate can win the popular vote and lose the Electoral College.	Winning California's 54 electoral votes matters more than winning one small state's 3.
---	---

10	Citizenship & Naturalization	Citizenship comes from birth (born in the U.S. or to U.S. citizen parents) or naturalization. Naturalization requires residency, English ability, civics knowledge, and an oath.	The naturalization TEST includes civics questions - the same content this guide teaches.	A lawful permanent resident can apply for citizenship after meeting residency and other requirements.
11	Voting Rights & the Amendments	Voting is protected and expanded by amendments: 15th (race), 19th (women), 26th (18-year-olds). The 24th banned poll taxes.	Match amendments to the group they enfranchised: race = 15th, women = 19th, age 18 = 26th.	The 19th Amendment (1920) gave women the right to vote.
12	The Supreme Court & Judicial Review	The Supreme Court is the final interpreter of the Constitution. Marbury v. Madison (1803) established judicial review - courts can strike down laws that violate the Constitution.	Judicial review = courts checking laws against the Constitution.	Brown v. Board of Education (1954) used judicial review to strike down school segregation.
13	Political Parties & Elections	Major parties organize candidates and voters around broad platforms. Elections (primary, general) decide who holds office; campaigns and the media shape voter choices.	A 'primary' picks a party's candidate; the general election picks the officeholder.	Voters choose the party nominee in the primary, then the winner in November.
14	Rights & Responsibilities of Citizens	Rights: speech, religion, voting, trial by jury. Responsibilities: obey laws, pay taxes, serve on		

juries, participate
(vote, stay
informed).

Rights are what
you may do;
responsibilities
are what you
should do as a
citizen.

Serving on a jury
when called is a
civic
responsibility.

Section 10: Social Studies - US History, Economics & Geography (14 Concepts)

About 20% US history, 15% economics, and 15% geography & the world. Questions lean on reading passages, graphs, and maps - connect the event to its cause and effect.

#	Term	Key Facts	GED Tip	Example
1	Colonization & the American Revolution	Colonies grew under British rule; taxation without representation (Stamp Act, Tea Act) sparked rebellion; the Revolution (1775-1783) won independence.	Connect cause to effect: British taxes + no representation -> revolution.	The Boston Tea Party protested the Tea Act's tax.
2	The Founding & the Constitution Era	After independence, the Articles of Confederation were too weak, so the Constitution (1787) created a stronger federal government with a Bill of Rights.	The Articles failed because the national government had too little power.	Shays' Rebellion helped convince leaders the Articles needed replacing.
3	Slavery, Sectionalism & the Civil War	The nation split over slavery and states' rights; the Civil War (1861-1865) preserved the Union; the 13th amendment ended slavery, followed by Reconstruction.	Sectional divide = North (industry, no slavery) vs South (plantation slavery) -> war.	The Emancipation Proclamation (1863) declared enslaved people in rebel states free.
4	Reconstruction & Its Aftermath	Reconstruction (1865-1877) rebuilt the South and extended rights (13th, 14th, 15th amendments) but ended with Jim Crow laws that enforced		

segregation.

The 14th Amendment (equal protection) was a Reconstruction triumph; Jim Crow was its reversal.

The 14th Amendment granted citizenship and equal protection of the laws.

5	Westward Expansion & Industrialization	Railroads, mining, and farming pushed settlers west (displacing Native peoples). The Industrial Revolution built factories, cities, and a national economy.	Technology (railroads, steel, electricity) drove growth - and growth drove immigration.	The transcontinental railroad (1869) linked the coasts and reshaped the West.
6	The Great Depression & the New Deal	The 1929 stock market crash triggered the Great Depression; FDR's New Deal created relief, recovery, and reform programs (Social Security, WPA, FDIC).	Know the arc: crash -> depression -> New Deal programs as the government response.	Social Security (1935) still provides retirement income - a New Deal legacy.
7	World War II & Postwar America	The U.S. entered WWII after Pearl Harbor (1941); the Allies won in 1945. Afterward, the U.S. led the postwar order (UN, NATO) and boomed economically.	Pearl Harbor (Dec 1941) ended U.S. neutrality - the key turning point for U.S. entry.	The G.I. Bill helped millions of veterans attend college after WWII.
8	The Cold War & Civil Rights	The Cold War (1947-1991) was a rivalry with the Soviet Union (containment, space race, arms race). At home, the Civil Rights Movement won desegregation and voting rights.	Match movements to wins: Civil Rights Act (1964), Voting Rights Act (1965).	The Voting Rights Act of 1965 outlawed barriers like literacy tests.
9	Supply & Demand	Price rises when demand is high or supply is low; price falls when supply is high or demand is low. The intersection sets the market price.	Shift either side to predict price: a freeze that kills oranges (low supply) raises prices.	A popular new phone with limited stock sells at a high price - high demand, low supply.

10	Economic Systems & Markets	Market economies let supply/demand set prices; command economies let government decide; mixed economies blend both - the U.S. is a mixed market economy.	Who decides what gets made? Consumers/producers (market) vs government (command).	U.S. businesses set prices freely, but the government regulates safety - a mixed economy.
11	Inflation & Personal Finance	Inflation is a general rise in prices that shrinks purchasing power. Budgeting, saving, interest, and credit are tested as everyday skills.	Inflation means your dollar buys less over time; wages that do not keep up lose real value.	\$100 buys less each year if inflation runs at 3% without a raise.
12	Trade & Globalization	Trade lets countries specialize and exchange goods; imports and exports, tariffs, and comparative advantage shape the economy.	Tariffs = taxes on imports (make imported goods pricier); comparative advantage = making what you produce best.	The U.S. exports aircraft and imports coffee - each specializes.
13	Reading Maps & Geographic Thinking	Maps show location, scale, and symbols (legend). Geographic questions read a map to identify regions, routes, and physical features.	Read the LEGEND first - the symbols decode the whole map.	A map with arrows for 'settlers moving west' shows migration routes.
14	Geography & Human Interaction	Geography shapes settlement, trade routes, and conflict; humans modify the environment (farming, dams, cities) with effects on		

resources and
climate.

Ask 'how does
location affect
the people here?'
- that is
human-environm
ent interaction.

River valleys
support farming,
so cities grow
along them.

Section 11: Test-Day Strategy & Pacing (12 Concepts)

Computer-based testing, scheduling subjects separately, scoring bands, retakes, and the per-subject time budgets that protect your score.

#	Term	Key Facts	GED Tip	Example
1	Computer-Based Format	The GED runs on a computer at a Pearson VUE center (or online proctored where your state offers it): one question at a time, with highlight, flag, and on-screen tools.	Practice on the free GED computer tutorial before test day so the interface feels automatic.	Flag a question and return to it later - the flag tool works within a test.
2	Scheduling One Subject at a Time	You take the 4 tests separately, in any order, on your own schedule. Most people pass faster by focusing on ONE subject at a time.	Take the subject you are strongest at first to build confidence; then tackle the weakest with dedicated prep.	Schedule RLA and Math on different days so each gets its own study block.
3	Scoring Bands (145/165/175)	Each subject scores 100-200. 145-164 = passing High School Equivalency; 165-174 = College Ready; 175-200 = College Ready + Credit (up to 10 credits at some colleges).	Know your target: if you are job-hunting, 145+ is the win; aiming for 175+ can earn college credit.	Two of your four scores at 170 and two at 150 still mean a passed credential.
4	Pacing: RLA (~150 min)	RLA has a reading/writing multiple-choice portion, a 10-minute break, and a 45-minute extended response timed separately. Budget ~1.5 min per reading		

question.

			Do not rush the break - stand, stretch, and come back fresh for the 45-minute essay.	On the MC portion, flag long reading questions and return after the quick wins.
5	The 45-Minute Extended Response Budget	Spend about 8-10 min reading and planning, ~30 min writing, and ~5 min		

editing. A short,
organized
response beats a
long, rambling
one.

Plan the intro
claim and pick
TWO pieces of
evidence
BEFORE writing

- planning is half
the score.

Write: intro
(claim) ->
body (evidence
1) -> body
(evidence 2)

-> conclusion.

6	Pacing: Math (115 min)	Math has Part 1 (no calculator, a few questions) and Part 2 (calculator + formula sheet). Use the short break between parts.	On Part 1, do simple arithmetic carefully by hand; save the calculator questions for Part 2.	Use the formula sheet: circle its formulas before you start so you know what is there.
7	Pacing: Science (90 min) & Social Studies (70 min)	Science: 90 minutes, passage+data heavy - read the question, then the graph/passage. Social Studies: 70 minutes, reading-heavy with civics focus.	In both, read the QUESTION before the passage - you know what to look for.	A science question about a chart's trend needs the graph, not the whole paragraph.
8	Answer Every Question	There is NO penalty for guessing on the GED - wrong answers and blanks score the same.	Never leave a blank; eliminate wrong options, then guess. A 1-in-4 blind guess is free.	Even a completely guessed question has a 25% chance - better than 0% for a blank.
9	Flag, Skip & Return	On the computer, flag uncertain questions and keep moving; return to flagged items if time remains.	The flag tool keeps your place - your first pass should answer the questions you know.	With 10 minutes left, return to flags before rechecking easy questions.
10	Retake Strategy	If you score below 145, most states allow up to two retakes with no waiting period; after that, a 60-day wait applies. Fees vary by state.	Do not retake cold - use a GED Ready test to confirm you are in the passing range first.	A 139 score report naming 'algebra' as weak tells you exactly what to drill for the retake.
11	State Rules & Fees	Each state sets its own GED fees, age and residency rules, and retake policies. Your score report and ged.com are the authoritative		

Sources.

Book through your state's official GED portal, not third-party sites, to avoid surprise fees.

Check your state page: some states discount retakes; some require a prep course under 18.

12	The Credential & What Comes Next	Passing all four subjects with 145+ earns the GED credential - accepted like a high school diploma for jobs, apprenticeships, and college. College Ready scores can skip placement tests.	Bring your score report to the college admission office: 165+ and 175+ have real benefits (placement waivers, credit).	A 175+ on Math, for example, may earn a math course waiver at participating colleges.
----	--	--	--	--

Final Review: 48-Hour Rapid Review

The highest-yield items to drill in your final two days.

- The GED is four computer-based subject tests: RLA (~150 min, incl. the 45-min extended response), Math (~115 min, 2 parts, formula sheet + TI-30XS on Part 2), Science (~90 min), Social Studies (~70 min). Each scores 100-200; pass each with 145+. College Ready 165-174; College Ready + Credit 175-200. No guessing penalty - answer everything. You can take the subjects separately, in any order. Most states allow 2 free retakes with no wait, then a 60-day wait.
- RLA: reading answers must be supported by the text (main idea, inference, author purpose, evidence). Writing: subject-verb agreement ignores interrupting phrases; two full sentences need a period, semicolon, or comma + conjunction; parallel structure keeps lists in one form. Extended response in 45 min: 8-10 plan / 30 write / 5 edit; intro claim, 2 body paragraphs with cited evidence from BOTH sources, conclusion; scored on argument & evidence, organization, and conventions (double-weighted).
- Math: PEMDAS; percents (change relative to ORIGINAL); proportions cross-multiply; slope = rise/run, $y = mx + b$; systems by elimination/substitution; factor quadratics (pairs that multiply to c, add to b); area of triangle = $\frac{1}{2}bh$; Pythagorean $a^2 + b^2 = c^2$; circle area πr^2 , circumference $2\pi r$; volume = base area x height ($\frac{1}{3}$ for pyramids/cones); area scales k^2 , volume k^3 ; mean vs median (sort first).
- Science: independent = changed, dependent = measured; control group isolates cause; conclusions stay inside tested scope; cell jobs (mitochondria = energy, nucleus = control); photosynthesis stores energy, respiration releases it; mass/energy conserved. Social studies: 1st Amendment speech/religion; 3 branches make-enforce-interpret; checks & balances; bill-to-law (both houses + president, veto override 2/3); amendments 13/14/15/19/26; federalism (national vs state); supply low/demand high = price up; tariffs tax imports.
- Test-day: schedule one subject at a time; flag and return; answer every question; read the question before the passage/graph; use the formula sheet; keep the ER to the 8/30/5 budget; know your state's fees and retake rules before booking. Sleep, eat, ID, and arrive early.

Test-Day Blueprint: The 10-Point Checklist

A condensed checklist to review the morning of the test.

- 1. Confirm your appointment: subject, date, time, test center (or online-proctored link), and photo ID.
- 2. Know today's subject (one at a time) and its time: RLA ~150 min (incl. 45-min ER + 10-min break), Math ~115 min, Science 90, Social Studies 70.
- 3. On Math, know the parts: Part 1 = no calculator; Part 2 = on-screen TI-30XS + formula sheet. Use the break between parts.
- 4. Answer EVERY question - there is no penalty for guessing, and blanks score zero.
- 5. Flag uncertain questions and return to them with leftover time inside the test.
- 6. Read the QUESTION first, then the passage or graph - you know what to look for.
- 7. On the extended response: 8-10 minutes planning, ~30 writing, 5 editing; cite evidence from BOTH sources; keep it organized and formal.
- 8. Use the formula sheet on Math - the test gives you the formulas, so spend your energy applying them.
- 9. Check your score band goal: 145+ = passing; 165 = College Ready; 175 = College Ready + Credit.
- 10. After the test: review the score report's skill breakdown; if you are below 145, retake within your state's policy (usually 2 free retakes, then a 60-day wait).
-
- Remember: GED(R) is a registered trademark of the American Council on Education, administered by GED Testing Service and Pearson VUE. This guide is an independent study aid, not affiliated with or endorsed by ACE, GED Testing Service, or Pearson VUE. Verify current format, scoring, fees, and retake rules for your state at ged.com.