

Kansas Ged Study Guide



QuickStudy Academic

GED Test Prep

Every mathematical concept covered on the exam with examples to boost your score

Mathematical Reasoning

Overview

- There are 46 questions: 5 with a calculator not permitted, and 41 with a calculator allowed.
- The duration of the exam is 115 minutes.
- About 45% of the questions cover arithmetic and geometry, and 55% cover algebraic reasoning and data interpretation.
- Most questions use the multiple-choice format. Some questions are fill in the blank, drop box, drag and drop, and select an area.
- The test will provide several formulas in a reference section.
- There is no trigonometry or calculus on this test.
- Successful test takers can be certified as college ready and can earn up to 10 college hours.
- This exam tests your knowledge of:
 - Basic arithmetic, including the order of operations, fractions, decimals, and percents
 - Simple and multi-step equations
 - Creating equations based on word problem scenarios
 - Ratios and proportions as tools to predict outcomes
 - Graphing linear and quadratic equations in the coordinate plane
 - Calculating the perimeter and area of plane figures, such as circles, squares, rectangles, trapezoids, and triangles
 - Finding the surface area and volume of three-dimensional figures
 - Interpreting data from charts and tables
 - Finding the mean, median, mode, and range of data sets
 - Modeling real-life situations using linear functions

Arithmetic

Topics include the real number system, operations with real numbers, signed numbers, properties of exponents, the order of operations, absolute value, scientific notation, fractions, mixed numbers and improper fractions, decimals, converting fractions into decimals and decimals into fractions, understanding percents as fractions, and simple interest problems.

The Real Number System
The real number system consists of counting numbers, whole numbers, integers, and rational/irrational numbers.

- Counting/Natural numbers:** Numbers beginning with 1 that do not include fractions or decimals.
EX: 1, 2, 3, 4, ...
- Whole numbers:** Numbers beginning with 0 that do not include fractions or decimals.
EX: 0, 1, 2, 3, ...
- Integers:** Any number, positive, negative or 0, that does not contain a fraction or decimal.
EX: ...-2, -1, 0, 1, 2, ...
- Rational numbers:** Numbers that can be expressed as a fraction or decimal. When containing a decimal component, the number must terminate or repeat a pattern.
EX: 5.2, $9\frac{1}{2}$, $-\frac{3}{11}$, $-5.222...$, $-\frac{8}{1}$
- Irrational numbers:** Numbers that do not terminate or repeat a pattern.
EX: π , 1.4159..., $\sqrt{3}$, $\sqrt[3]{2}$ (2.645751...)

Operations with Real Numbers
Operations include addition, subtraction, multiplication, and division.

The results of mathematical operations have special names:

- Addition:** Sum
- Subtraction:** Difference
- Multiplication:** Product
- Division:** Quotient

Operations can be written vertically or horizontally.

- Addition:**
$$\begin{array}{r} 9 \\ + 9 \\ \hline 18 \end{array}$$
 $9 + 9 = 18$
- Subtraction:**
$$\begin{array}{r} 100 \\ - 54 \\ \hline 46 \end{array}$$
 $100 - 54 = 46$
- Multiplication:**
$$\begin{array}{r} 19 \\ \times 6 \\ \hline 114 \end{array}$$
 $19 \times 6 = 114$
- Division:**
$$\begin{array}{r} 27 \overline{) 729} \\ 27 \overline{) 729} \\ \hline 0 \end{array}$$
 $729 \div 27 = 27$

Absolute Value
The absolute value of a number is its distance from 0 on a number line. The symbol for absolute value is $| |$.
EX: $|7| = 7$ and $|-7| = 7$
7 and -7 are both 7 units away from 0 on a number line.

Signed Numbers
Numbers can be positive or negative. Zero (0) is neither negative nor positive.
A positive number plus a positive number is positive.
EX: $107 + 79 = 186$
A positive number plus a negative number can be positive or negative.

Properties of Exponents
An exponent, also known as a power, is a small raised number that indicates how often a number is multiplied by itself.
EX: 7^2
7 is the base and 2 is the exponent.
 $7^2 = 7 \times 7 = 343$
When multiplying numbers with the same base, add the exponents.
EX: $2^2 \times 2^2 = 2^{2+2} = 2^4 = 16$
When raising an exponent to another exponent, multiply the exponents.
EX: $(2^2)^3 = 2^{2 \times 3} = 2^6 = 64$
When dividing numbers with the same base, subtract the exponents.
EX: $5^5 \div 5^2 = 5^{5-2} = 5^3 = 125$

The Order of Operations
The order of operations can be remembered as PEMDAS: Parentheses, Exponents, Multiplication, Division, Addition, Subtraction.
When a line of calculations contains only multiplication and division, or addition and subtraction, proceed from left to right.
EX: $5(9 - 4) + 12 \div 4 = 5 \times 5 + 3 = 28$

Scientific Notation
Scientific notation expresses numbers as powers of 10. Move the decimal point to the left or right until you have a number greater than or equal to 1 and less than 10. If you move the decimal point to the left, add that many powers of 10. If you move the decimal point to the right, subtract that many powers of 10.
EX: $453.7 = 4.537 \times 10^2$
 $.00398 = 3.98 \times 10^{-5}$

Fractions
The top number of a fraction is the numerator and the bottom number is the denominator. In the fraction $\frac{7}{9}$, 7 is the numerator and 9 is the denominator.
When adding or subtracting fractions with the same denominator, add or subtract the numerators and keep the same denominator.
EX: $\frac{3}{11} + \frac{7}{11} = \frac{10}{11}$
 $\frac{13}{17} - \frac{7}{17} = \frac{6}{17}$
When adding or subtracting fractions with different denominators, create fractions with the same denominators.
EX: $\frac{2}{3} + \frac{1}{5} = \frac{2 \times 5}{3 \times 5} + \frac{1 \times 3}{5 \times 3} = \frac{10}{15} + \frac{3}{15} = \frac{13}{15}$
When multiplying fractions, first multiply numerators and then the denominators. Simplify if needed.
EX: $\frac{3}{10} \times \frac{5}{9} = \frac{15}{90} = \frac{1}{6}$

Mixed Numbers & Improper Fractions
A mixed number is an integer with a fraction component.
EX: $7\frac{2}{3}$
An improper fraction is one in which the numerator exceeds the denominator.
EX: $\frac{18}{11}$
A mixed number can be converted to an improper fraction by multiplying the denominator by the whole number and adding the numerator. Remember to keep the original denominator.
EX: $7\frac{2}{3} = \frac{7 \times 3 + 2}{3} = \frac{23}{3}$
An improper fraction can be converted to a mixed number by dividing the numerator by the denominator. Any remainder becomes a fraction with the original denominator.
EX: $18 \div 11 = 1$ remainder 7
 $\frac{18}{11} = 1\frac{7}{11}$

Many fraction questions can be solved quickly using the TI-30X calculator.
View the GED Testing Service video to learn how to use the online calculator at <https://www.gedtesting.com/watch?v=V6LZL5K0AE&t=200s>.

Decimals
A decimal is a fraction with a denominator of some power of 10.

Kansas GED Study Guide is an essential resource for anyone looking to earn their General Educational Development (GED) diploma in Kansas. The GED test is an alternative to a traditional high school diploma and is widely recognized by employers and educational institutions. Passing the GED can open doors to new job opportunities, higher education, and personal satisfaction. This guide aims to provide you with detailed information on how to prepare for the Kansas GED, including study strategies, resources, and tips for success.

Understanding the GED Test

Before diving into study strategies, it's important to understand what the GED test entails. The GED consists of four subject areas:

- Reasoning Through Language Arts (RLA)
- Mathematical Reasoning
- Science
- Social Studies

Each subject tests different skills, and passing all four is required to earn your GED credential.

Reasoning Through Language Arts (RLA)

The RLA section evaluates reading comprehension, writing skills, and the ability to analyze and understand various texts. It includes:

- Reading passages from fiction and nonfiction texts
- Writing an extended response (essay)
- Analyzing the structure and meaning of texts

Mathematical Reasoning

This section assesses quantitative problem-solving skills, including:

- Basic math (addition, subtraction, multiplication, division)
- Algebra
- Geometry
- Data analysis and statistics

Science

The Science section tests your understanding of life science, physical science, and Earth and space sciences. Key areas include:

- Scientific practices
- Understanding of scientific concepts
- Interpretation of scientific information

Social Studies

In this section, you will be evaluated on your knowledge of history, geography, economics, and government. Topics include:

- U.S. history
- World history
- Civics and government
- Geography and economics

Preparing for the Kansas GED

Preparation is key to successfully passing the GED test. Here are some strategies and resources to help you get started.

1. Create a Study Plan

A well-structured study plan can keep you organized and focused. Consider the following steps:

- Assess your current knowledge: Take a practice test for each subject to identify areas for improvement.
- Set realistic goals: Break down your study sessions into manageable chunks. Aim for consistent daily or weekly study hours.
- Schedule regular practice tests: These will help you track your progress and build confidence.

2. Use Official GED Study Materials

The official GED Testing Service offers various resources, including:

- GED Study Guide: A comprehensive guide that covers all four subjects.
- Online practice tests: Simulate the real testing experience.
- Video lessons: Visual aids that explain difficult concepts.

3. Explore Local Resources

In Kansas, there are numerous local resources available to help you prepare for the GED:

- Adult Education Programs: Many community colleges and adult education centers offer GED preparation classes.
- Libraries: Local libraries often have study materials and may host study groups.
- Online Learning Platforms: Websites like Khan Academy, GED.com, and others provide free resources tailored for GED preparation.

4. Join a Study Group

Collaborating with others can enhance your learning experience. Consider joining a study group for the following benefits:

- Shared resources and study tips
- Motivation and accountability from peers
- Access to different perspectives and explanations of challenging topics

Test-Taking Strategies

Once you have prepared adequately, it's time to focus on test-taking strategies. These can help you manage your time effectively and reduce anxiety on test day.

1. Familiarize Yourself with the Test Format

Understanding the structure of the GED test is crucial. Familiarize yourself with:

- The types of questions (multiple choice, short answer, extended response)
- The time allocated for each section
- The scoring criteria

2. Manage Your Time Wisely

Time management is essential during the test. Here are some tips:

- Read instructions carefully but quickly.
- Allocate time for each question based on its difficulty.
- Keep an eye on the clock, and if a question is taking too long, move on and return to it later.

3. Read Questions Carefully

Take your time to read each question thoroughly. Look for keywords and understand what is being asked before selecting an answer.

4. Use the Process of Elimination

If you're unsure about an answer, eliminate the options you know are incorrect. This increases your chances of guessing correctly.

After the Test: What's Next?

After you take the GED test, you'll typically receive your scores within a few hours to a few days. If you pass, congratulations! You can request your GED diploma and transcripts. If you don't pass a section, don't be discouraged. You can retake the test after a waiting period, and you should take the opportunity to review and improve in the areas where you struggled.

Conclusion

Preparing for the GED can seem daunting, but with the right tools and strategies, you can increase your chances of success. Utilizing a Kansas GED Study Guide, enrolling in local programs, joining study groups, and practicing test-taking strategies will set you on the path to earning your GED. Remember, this achievement not only represents academic success but also a stepping stone toward a brighter future. Start your preparation today, and take the first step toward achieving your goals!

Frequently Asked Questions

What are the primary subjects covered in the Kansas GED study guide?

The Kansas GED study guide covers four primary subjects: Reasoning Through Language Arts, Mathematical Reasoning, Science, and Social Studies.

Where can I find official Kansas GED study materials?

Official Kansas GED study materials can be found on the Kansas GED website or through local adult education centers and libraries that offer GED preparation resources.

Is there an online GED preparation course available for Kansas residents?

Yes, many online platforms offer GED preparation courses specifically tailored for Kansas residents, including both free and paid options.

How can I effectively prepare for the Kansas GED test?

To effectively prepare for the Kansas GED test, create a study schedule, utilize practice tests, join study groups, and make use of the Kansas GED study guide materials.

What is the passing score for the Kansas GED test?

The passing score for each subject test in the Kansas GED is 145 out of 200, and you must pass all four subjects to earn your GED diploma.

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"Unlock your potential with our comprehensive Kansas GED study guide. Prepare effectively and boost your chances of success. Learn more today!"

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