The University of Texas at Austin
Sanger Learning Center
School of Undergraduate Studies

GRE Quantitative Reasoning (math)

Measures your ability for problem-solving, with a focus on basic concepts of arithmetic, algebra, geometry as well as data analysis.

DON'T PANIC!
The focus is on reasoning and not computation, so an online calculator will be provided.

How to prepare

1. Know the math content and develop the related skills → Math Review (pdf)
2. Get familiar with the language of math (symbols, terminology, notation) → Math Conventions (pdf)
3. Practice (a lot!) → POWERPREP II software

FREE TOOLS FOR YOUR SUCCESS
all available on gre.org

1. Know the math content (and develop the related skills!)

Arithmetic
- Integers
- Fractions
- Exponents & roots
- Decimals
- Real numbers
- Ratio & percent

Geometry
- Lines and angles
- Polygons
- Triangles
- Quadrilaterals
- Circles
- Three-dimensional figures

Algebra
- Operations with algebraic expressions
- Rules of exponents
- Solving linear equations
- Graphs of functions
- Quadratic equations
- Linear inequalities
- Word problems
- Coordinate geometry

Data Analysis
- Graphical & numerical methods for describing data
- Counting methods
- Probability
- Distributions of data
- Random variables
- Probability distributions

2. Get familiar with the language of math

Math has its own system of shorthand. Get familiar with common symbols, conventions, and the meaning of key terms.

Coordinate axes and number lines are drawn to scale ... diagrams may or may not be!

What is an ordered pair?

What is real number?

x^2

What is the difference between a circumference and a perimeter?

What symbols are used to show that a collection of numbers are a set?

3. Practice (a lot!)

There are four types of questions on the test. Practice computer-based examples of each, and work your way up to taking a complete test (with a time limit).

I. Quantitative Comparison

Ask you to compare two quantities – Quantity A and Quantity B – and then determine which of the following statements describes the comparison:

Ⓐ Quantity A is greater.
Ⓑ Quantity B is greater.
Ⓒ The two quantities are equal.
Ⓓ The relationship cannot be determined from the information given.

II. Multiple Choice
(select one answer choice)

Multiple-choice questions that ask you to select only one answer choice from a list of five choices.

III. Multiple Choice
(select one or more answer choices)

Multiple-choice questions that ask you to select one or more answer choices from a list of choices. A question may or may not specify the number of choices to select.

IV. Numeric Entry

Ask you either to enter your answer as an integer or a decimal in a single answer box or to enter it as a fraction in two separate boxes — one for the numerator and one for the denominator.

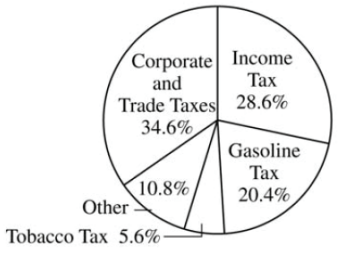
SAMPLE GRE TEST QUESTIONS

In the xy-plane, the points (a,0) and (0, b) are on the line whose equation is $y = 0.5x + 10$.

Quantity A	Quantity B
a	b

Ⓐ
Ⓑ
Ⓒ
Ⓓ

DISTRIBUTION OF GERMANY'S TOTAL TAX REVENUE IN 2000



In 2000 the amount of Germany's gasoline tax revenue was approximately what percent less than the amount of its income tax revenue?

Ⓐ 10%
Ⓑ 20%
Ⓒ 30%
Ⓓ 40%
Ⓔ 50%

FOR THE FOLLOWING QUESTION, SELECT ALL THE ANSWER CHOICES THAT APPLY.

In triangle ABC, the measure of angle B is 90°, the length of side AB is 4, and the length of side BC is x. If the length of hypotenuse AC is between 4 and 8, which of the following could be the value of x?

Indicate all such values.

Ⓐ 1
Ⓑ 2
Ⓒ 3
Ⓓ 4
Ⓔ 5
Ⓕ 6

At Company Y, the ratio of the number of female employees to the number of male employees is 3 to 2. If there are 150 female employees, how many total employees are there at the company?

_____

key: B A all 250