

MATHEMATICS

TEST DESCRIPTION

COMPASS mathematics is a computer-adaptive test designed to assess student skill levels in a variety of mathematics content areas. At the University of Oklahoma, students may be assessed in three content areas: Algebra, College Algebra, and Trigonometry. Since the COMPASS is an adaptive test, students are presented a series of initial items and then, based on their responses, appropriate subtest items are administered.

The **Algebra** subtest consists of items from three curricular areas: elementary algebra, coordinate geometry, and intermediate algebra. Each area is subdivided into specific content requirements.

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| <ul style="list-style-type: none">• Substituting values into algebraic expressions• Setting up equations for given situations• Basic operations with polynomials• Solving polynomial equations by factoring• Formula manipulations and field axioms• Linear equations in one variable• Exponents• Linear inequalities in one variable• Systems of linear equations in two variables | <ul style="list-style-type: none">• Rational expressions• Quadratic formula• Absolute equations and inequalities• Distance formula in the plane• Graphing conics• Graphing relations in a plane• Graphing systems of equations and rational functions• Midpoint formula |
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Items in the **College Algebra** pool assess algebra knowledge and skills in a variety of content areas such as operations with matrices, functions and factorials.

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| <ul style="list-style-type: none">• Systems of linear equations with three or more variables• Arithmetic and geometric sequences• Logic and proof techniques• Roots of polynomials | <ul style="list-style-type: none">• Complex numbers• Functions• Exponents• Factorials• Matrices |
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Trigonometry items examine understanding and problem-solving application of trigonometric concepts.

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| <ul style="list-style-type: none">• Trigonometric functions and identities• Trigonometric equations and inequalities• Special angles (30 and 45 degrees) | <ul style="list-style-type: none">• Right angle trigonometry• Graphs and trigonometric functions• Polar coordinates |
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There are three types of items within each subtest: *basic skill*, *application*, and *analysis*. Basic skill items can be solved by performing basic math operations. An application item involves applying basic operations to novel settings or in complex ways. An analysis item requires the conceptual understanding of the principles and relationships relevant to particular mathematical operations.

Scratch paper, pencils, and a 4-function calculator will be provided during this un-timed test. Students may take the math assessment twice per enrollment period. **Test results are valid for one calendar year from the date of the test.** Students must be seated in the math course before scores expire and retesting is required.

Assessment and Learning Center hours are 8:00 a.m. to 5:00 p.m. Monday through Friday. Students may be seated for testing from 8:00 a.m. until 3:30 p.m.* We are located in the Lissa and Cy Wagner Hall, room 270.

*Summer walk-in testing hours are 1:00 p.m. to 3:30 p.m.

Any calculator allowed on ACT exams can be used on the COMPASS Math test. Currently, up to and including a TI-86-level calculator can be used.

Sample questions can be found on the following website:

<http://www.act.org/compass/sample/index.html>.

Additionally, the web page below includes links to Skills Development Websites, including sites that may be used to review formulas and functions before taking the math placement test:

http://www.ou.edu/univcoll/home/academic_resources/Skill_Development_Websites.html

Free Online Math Tutorials

tutorial.math.lamar.edu

(College, Intermediate & Beginning Algebra)

www.sosmath.com

(Algebra to Differential Equations)

www.math.com

(Good for students with basic math skills)

www.purplemath.com

(Click on Lesson Index)

www.freemathhelp.com

(Click on Math Lessons)

www.mathworld.com

www.analyzemath.com

(Tutorials, problems, & worksheets

w/applets)

<http://math.usask.ca/emr/menu.html>

(Exercises in math readiness for university study)

<http://www.wtamu.edu/academic/anns/mps/math/mathlab> (Virtual Math Lab)

(These sites, not affiliated with the University of Oklahoma, have helpful tips, exercises, etc.)

If you have any additional questions, please contact the Assessment and Learning Center at (405) 325-4336.