



DICKSON COUNTY SCHOOL DISTRICT

Every Student Every Day

Preparing for High School Math May 2020

Dickson County math teachers have indicated key skills that would help students be prepared for high school EOC math courses and 4th year math classes. These skills can be practiced at home in a variety of ways – through skills practice and online resources.

District Packets will remain on the Dickson County Schools website through the summer. These packets contain skills practice pages with answers attached that students could practice. Students can download these and work on their paper without the need for the internet or printing. Go to www.dcostn.org, choose Parents and Students tab, then select Online Learning, Instruction, and Technology Resources. Choose high school, then the course, and select from the 3 printable District Packets which include foundation skills needed for success in Algebra I, Geometry, and Algebra II. Students can work on practice pages based on the skills listed below.

Additional options to prepare your high schooler to be successful in math class next year, here are skills that can be practiced from home and online ideas to get you started:

Algebra I

- Order of Operations (6th – 8th grade)
- Solving One-Step Equations (6th grade)
- Solving Two- Step Equations (7th grade)
- Solving Multi-Step Equations with Distributive Property and Combining Like Terms (6th – 8th grade)
- Exponent Rules (8th grade)
- Square Roots (8th grade)

Geometry

- Vocabulary – Examples include the following: Points, lines, line segments, rays, angles (right, acute, obtuse, straight, reflex), and perpendicular and parallel lines (4th grade); volume = Base x height (5th grade); coordinate plane, x-axis, y-axis, origin, quadrant, vertex (5th grade and up); area, circumference, surface area (7th grade); supplementary, complementary, vertical, and adjacent angles (7th grade); dilations, translations, rotations, and reflections (8th grade); angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles (8th grade)
- Solve linear equations (6th – 8th grade, Algebra I)
- Write equations of lines – given 2 points, given graph of the line, given equation of line parallel or perpendicular to given line (8th grade, Algebra I)
- Volume of 3D figures – understanding volume is the area of the base times the height (8th grade)
- Pythagorean Theorem – how to use it to identify a right triangle or find a missing side (8th grade)

Algebra II

- Factoring quadratic equations (Algebra I)
- Solving equations - one-step, two-step, multi-step (6th grade and up)
- Solving inequalities - one-step, two-step, multi-step (6th grade and up)
- Graphing linear and quadratic functions – identify intercepts, maximums, and minimums (Algebra I); graphing using ordered pairs or table (8th grade); graph given equations (8th grade and Algebra I)

4th Year Math Classes

- Solving linear equations – one-step, two-step, multi-step (6th grade and up)
- Solve quadratic equations (Algebra I and Algebra II)
- Factor trinomials (Algebra II)
- Right triangle trigonometry (Geometry)

For students who enjoy online practice and would like to challenge themselves by attempting next year's course content or reviewing last year's skills, here are a few websites that will allow you to pick and choose topics.

- Edgenuity – this is the online platform high school students have been using since the closure of schools. Go to the DC schools website, follow instructions for District Packets, and choose high school. (incoming freshman will not have this option yet)
- Khan Academy (K-12) – offers free lessons where students can use exercises, quizzes, and instructional videos to learn and master skills. Students will get immediate feedback and encouragement.
<https://www.khanacademy.org/>
- MATHia from Carnegie Learning (6 – 12) – “guides students through sample problems, describing each step, rephrasing or redirecting questions, and honing in on the parts of the problem that are proving difficult. It encourages problem-solving and provides hints every step of the way so students don't get stuck on a problem.” Go to <https://discover.carnegielearning.com/MATHiaHome.html> to create an account that is free through the summer for parents & students. [MATHia@Home's powerful 1-to-1 coaching technology adapts to give students exactly what they need at any given moment so they can still make progress on their class goals while school is not in session. Real-time feedback and hints make sure that your students will not get stuck.](#)
- ACT Practice - If students would like to get a jump start on ACT and receive targeted ACT practice, go to <https://academy.act.org/>. This site contains free ACT practice, including free assessments, videos, games, and interactives.