SMCA Summer Math Reinforcement

Greetings all,

We here at the SMCA math department pray that your summer is off to a safe and relaxing start. We know that summer is time where school is often far from our minds, but also know that spending a little time in study during the summer months is an effective way to keep our minds engaged in the learning process. To help encourage this time of summer learning, we as a department have compiled some resources and topics for our students to review and study this summer to build a stronger base in mathematics for the coming school year. These resources are 100% optional but also 100% encouraged. Please feel free to use the resources and topics outlined below as you study with yourself or your student this summer, and together, we will be ready to face the new school year with strength and alacrity. Thanks again for your hard work and dedication to our mission as a school to nurture, train, and equip our students for success.

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Online Learning Resources:
Khan Academy "Get Ready" Courses
https://www.khanacademy.org/

Kuta Software Free Online Math Worksheets
https://www.kutasoftware.com/

Topics to Reinforce by Course (note that honors courses are included with their base course):
Entering Sixth Grade Math:
-Performing integer operations (addition, subtraction, multiplication, and division)
-Writing and simplifying fractions
-Performing simple fraction operations
-Performing decimal addition and subtraction
-Graphing and ordering numbers on a number line
-Describing and applying percentages

Entering Pre-Algebra:
-Performing operations with integers
-Simplifying fractions
-Fraction operations
-Solving one-step and two-step equations
-Writing and applying percentages
-Describing basic geometric terms (lines, segments, rays, angles, bisectors)
-Finding volume of basic solids (cube, rectangular prim, cylinder, sphere, pyramid)
-Describing probability
-Solving proportions using cross products

Entering Algebra 1:
-Simplifying fractions
-Writing fractions as decimals
-Writing and apply percentages

-Applying area formulas for simple polygons
-Applying and describing properties of integers and
-Combining integers of same and different signs

Entering Geometry:
-Simplifying and solving one-step, two-step, and multi-step equations
-Solving and graphing simple one-variable inequalities
-Solving proportions using cross products
-Simplify polynomial expressions
-Plotting points on the coordinate plane
-Graphing and writing equations of linear functions

Entering Algebra II:
-Solving multistep equations
-Graphing and writing equations of linear functions
-Performing polynomial operations addition, subtraction, and multiplication
-Simplifying radicals (writing radicals in simplest radical form)
-Solving equations using roots

Entering Pre-Calculus / Algebra and Trigonometry:
-Writing and modeling inverse and joint variation
-Factoring polynomials
-Simplifying radical expressions
-Rationalizing denominators
-Describing and graphing conic sections
-Writing and applying trigonometric functions to solve right triangles