

SHSAT Formulas/rules You Should Know
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This is mostly the Grade 8 ones that come up often:

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- * degrees in closed polygons
- * perimeter, circumference, various areas, 2D shapes
circles, squares, rectangles, triangles, trapezoids, etc.
- * Pythagorean
- * using pi
- * coordinates, slope, representation of a line, midpoint, number line
- * using "PEMDAS" (including square root, absolute value ordering)
- * roots and exponents
- * solving simultaneous equations
- * rates, proportions, ratios, similarities
- * Cross product aka "butterfly technique"
- * absolute value, interest, discounts, taxes, percents, probability
- * distance, rate, speed, velocity, revolutions
- * conversions
- * centralities (min, max, range, mean, median)
- * prime factorizations, LCM, GCF
- * angle interactions, lengths of sides interactions
- * like terms
- * Odd and even number interactions
- * interactions with + and - during
addition/subtraction, multiplication/division,
exponents, roots, translations, number line
- * Conversion from whole numbers/mixed numbers,
fractions/decimals/rounding/estimating/scientific notation

This is mostly the Grade 9 ones that come up often:

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- * factorials, permutations, combinations
- * polynomials
- * 3D shapes and various volumes
cubes, cylinders, spheres, cones, pyramids, prisms, etc.
- * inequalities
- * FOIL
- * translations
- * knowing quadratic formula can be helpful
- * knowing SOHCAHTOA can be helpful

NOTE: Many of these float across both years

NOTE: The DOE does not provide any such lists,
so this document is based on many years of observations

NOTE: This is a sampling only, the DOE can add more as they wish

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