

SFHS – Mathematics Program Information for Incoming Freshmen

Mathematics Placement Test

For placement into Honors Advanced Algebra Trig*

*for those who have studied high school level Algebra and Geometry for a full year each

Most of the questions on the placement test will fall into one or more of these categories. We understand that the test is administered before the end of the school year and that schools are using different textbooks with different sequences of topics. We will keep that in mind when the tests are scored.

Algebra Topics for review

| | | |
|---|--|---|
| <p>➤ Real Numbers</p> <ul style="list-style-type: none"> • Addition, subtraction, multiplication & division of signed numbers • Order of operations • Evaluation of algebraic expressions • Absolute value | <p>➤ Polynomials</p> <ul style="list-style-type: none"> • Addition, subtraction, multiplication & division • Exponents • Factoring common factor • Factoring trinomials • Negative exponents | <p>➤ Equations & Inequalities</p> <ul style="list-style-type: none"> • Linear equations • Literal equations • Quadratic equations • Absolute value equations • Simple rational equations • Linear inequalities (including their graphs on a number line) |
| <p>➤ Graphing</p> <ul style="list-style-type: none"> • points • linear equations • Slope & y-intercept • Interpreting bar/circle graphs • Finding the equation of a line | <p>➤ Percent</p> <p>➤ Ratios & Proportions</p> <p>➤ Systems of Linear Equations</p> | <p>➤ Word problems</p> <ul style="list-style-type: none"> • Translating verbal expressions • General • Money • Motion • Perimeter & Area of circles, triangles, rectangles |

Geometry topics for review

| | | |
|---|--|---|
| <p>➤ Basics</p> <ul style="list-style-type: none"> • Points, lines, rays • Vertical angles • Supplementary & complementary angles • Angle classification • slope • perpendicular lines • parallel lines | <p>➤ Triangles</p> <ul style="list-style-type: none"> • Angle sum • classification • isosceles • right (including families and right triangle trig) • congruent • similar | <p>➤ Polygons</p> <ul style="list-style-type: none"> • names • interior and exterior angle measures • similar |
| <p>➤ Circles</p> <ul style="list-style-type: none"> • Arc length • Sector area • Definitions • Chord/tangent/secant properties • Central, inscribed, exterior angle properties | <p>➤ Area & perimeter</p> <ul style="list-style-type: none"> • quadrilaterals • regular polygons • circle | <p>➤ Volume & Area</p> <ul style="list-style-type: none"> • Rectangular solids • Cylinders • Cones • Pyramids • spheres |