**Well-Trained Mind Academy**
**Saxon Math for the Logic Stage**

**Course Blackboard site:** http://wtma.blackboard.com

Required Text(s):

- Hake, Steven and Saxon, John. *7/6.* Fourth Edition. Austin: Saxon Publishers, 2005.
    - ISBN 978-1-591-41319-6
- *MathXL for School*. Student course access provided by the Well-Trained Mind Academy.

Course Description:
Math 7/6 is a logic stage mathematics course to prepare students for pre-algebra. The course focuses on problem solving skills and engagement with numbers and terms to increase mathematical vocabulary and confidence. Topics include but are not limited to: review of arithmetic skills, extensive practice with fractions, data analysis, introduction to graphing, measurement, exponents, square roots, and introduction to geometry.

Prerequisite Skills: Multi-digit multiplication and division, addition and subtraction of fractions with the same denominator, basic fraction comparison, basic decimal arithmetic, solving for a missing number, writing an equation for a given word problem. Students should complete the Math 7/6 readiness test to determine whether they are ready for the class. https://docs.google.com/document/d/1x_qAXqwj5m1OHq8xDd-AM3ns-RIc0HIP3k5vF-Rg8u0/edit?usp=sharing

In addition, students must be comfortable using a computer to input work and must have a working computer microphone and camera. Students must have access to a scanner and must (with parental help) be able to save and submit written work as a PDF.

MathXL for School: Most of the problem sets will be completed in MathXL for School. The Saxon textbook will be essential for understanding coursework, and students will need to make regular reference to the textbook. In order to safeguard student privacy, each student will be assigned a generic student account in MathXL. No personal or identifying information has been, or will be, shared with the MathXL system. Note that MathXL grades are not the course grade. MathXL is one tool used in this course.

Written/Video Assignments:

- *Math Journal/Video Diary:* Students will write about and/or record their learning experience on a regular basis. 5% of final grade, total.
- *Discussion Questions*: Discussion questions will be drawn from the text. Each student must write a meaningful reply to the question by midnight, EST, Monday, and meaningfully respond to two other students' responses by midnight, EST, on Wednesday. See the assignment policies for more information about meaningful participation. 5% of final grade, total.
- *Math Projects:* Students will complete four hands-on math projects, one per quarter. Projects will vary and will be documented with video or photos. 5% of total grade, total.

Quizzes and Tests:

- *Weekly Quizzes:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Tests:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Comprehensive Exams*: There will be two comprehensive exams. 15% of final grade each.

Other Assignments/Requirements:

- *Homework Problems*: Students will complete problems chosen from each chapter section on MathXL. 30% of final grade, total.

Grading breakdown:

| *Course Work* | *Percentage* |
|---|---|
| Homework Problems | 30 |
| Weekly Quizzes | 12.5 |
| Tests | 12.5 |
| Discussion Questions | 5 |
| Math Journal | 5 |
| Math Projects | 5 |
| Comprehensive Final Exams—2 | 15 each (total 30%) |
| Total | 100 |

**Assignments:**

● *Math Formatting:* The object of the course is mathematics, not technology. A math editor is built into Blackboard for student use. All assignments must be uploaded to Blackboard in digital format. Therefore, emailed or texted assignments will not be accepted.

● *Partial Credit/Showing Your Work:* Requirements vary by problem type. Students are not required to show their work for short answer problems, however, if they do not show their work, and get the problem wrong, they cannot get partial credit. Partial credit is only given for problems when all work is shown. Test problems drawn from the book require that students show work in order to receive any credit.

● *Meaningful Participation:* A good rule of thumb is if you don't spend at least several minutes thinking about or developing your position and explaining it in a concise and clear manner, then it probably will not be meaningful. Criticizing without offering support is not considered worthwhile participation, and you will not receive credit. Examples of meaningful participation include:

- Sharing a related experience
- Commenting on others' experiences
- Asking classmates questions about their ideas and/or experiences
- Offering a different perspective about an idea that is being discussed
- Describing an interesting idea from the week's reading
- Asking the group a question about something in the course
- Disagreeing (respectfully)

- Describing a problem and asking for help
- Describing how you've used something you've learned in the course
- Sharing a relevant resource
- Describing relevant research and sharing information on how to find it
- Noting, briefly, the content and/or purpose of a useful website and providing a link (it is a violation of copyright law to copy the actual page)

The Well-Trained Mind Academy
Saxon Pre-Algebra

**Course Blackboard site:** http://wtma.blackboard.com

Required Text(s):

- Saxon, John. *8/7 with Pre-Algebra.* Third Edition. Austin: Saxon Publishers, 2005.
    - ISBN 9781565775091
- *MathXL for School*. Student course access provided by the Well-Trained Mind Academy.

Course Description:
Preparation for Algebra I. Pre-algebra focuses on problem solving skills and engagement with numbers and terms to increase mathematical vocabulary and confidence. Topics include but are not limited to: review of arithmetic skills, single and multivariable equations, data analysis, introduction to number theory, graphing, measurement, exponents, square roots, and introduction to geometry.

Prerequisite Skills: Multi-digit multiplication and division, basic arithmetic with negative numbers, addition and subtraction of fractions with the same denominator, basic fraction comparison, basic decimal arithmetic, writing an equation for a given word problem

MathXL for School: Most of the problem sets will be completed in MathXLforSchool. The Saxon textbook will be essential for understanding coursework, and students will need to make regular reference to the textbook. In order to safeguard student privacy, each student will be assigned a generic student account in MathXLforSchool. No personal or identifying information has been, or will be, shared with the MathXLforSchool system. Note that MathXLforSchool grades are not the course grade. MathXLforSchool is one tool used in this course.

Written Assignments:

- *Math Journal:* Students will write about their learning experience on a regular basis. 5% of final grade, total.
- *Weekly Discussion Questions*: Discussion questions will be drawn from the text. Each student must write a meaningful reply to the question by midnight, EST, Monday, and meaningfully respond to two other students' responses by midnight, EST, on Wednesday. See the Assignment policies for more information about meaningful participation. 5% of final grade, total.

Quizzes and Tests:

- *Weekly Quizzes:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Tests:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Comprehensive Exams*: There will be two comprehensive exams. 17.5% of final grade each.

Other Assignments/Requirements:

- *Homework Problems*: Students will complete problems chosen from each chapter section. 30% of final grade, total.

Grading breakdown:

| *Course Work* | *Percentage* |
|---|---|
| Homework Problems | 30 |
| Weekly Quizzes | 12.5 |
| Tests | 12.5 |
| Discussion Questions | 5 |
| Math Journal | 5 |
| Comprehensive Final Exams—2 | 17.5 each (total 35%) |
| Total | 100 |

- *Math Formatting*: The object of the course is mathematics, not technology. Therefore, while the use of LaTeX, MathType, Geogebra, and other software tools is encouraged, it is not required. A LaTeX editor is built into Blackboard for student use. At certain points, students may be expected to demonstrate use of a straightedge and compass, unless a student's documented exceptionality prevents such assignments. If students choose to hand-sketch and hand-write assignments that do not require handwork (i.e., can be done with LaTeX, etc), easily legible handwriting is required. In addition, all assignments, whether created with software or drawn by hand, must be uploaded to Blackboard in digital format. Therefore, emailed or texted assignments will not be accepted.
- *Partial Credit/Showing Your Work*: Requirements vary by problem type. Students are not required to show their work for Homework and Weekly Quiz problems—however, if they do not show their work, and get the problem wrong, they cannot get partial credit. Partial credit is only given for Homework and Weekly Quiz problems when all work is shown. Test problems drawn from the book require that students show work in order to receive any credit.

  *As a member of the Well-Trained Mind Academy, I pledge on my honor not to cheat, steal, lie, or plagiarize. I understand that such acts violate the Honor Code and will result in punitive action at the discretion of my Instructor, the Dean, or the Headmaster.*

Example Schedule:

| Week | Lessons | Assignment | Topic |
|---|---|---|---|
| 0 | -- | Introduction | Orientation |
| 1 | 1-5 | DQs<br>HW/Quiz | Arithmetic, Operations, Missing Numbers, Number Line, Place Value |
| 2 | 6-10 | DQs<br>HW/Quiz | Divisibility, Lines and Angles, Fractions and Percents, Operations with Fractions, Reciprocals |
| 3 | 11-14 | DQs<br>HW/Quiz | Word Problems |
| 4 | 15-18 | DQs<br>HW/Journal | Fractions, US Customary System, Measuring Angles, Polygons, Similar & Congruent |

| | | | |
|---|---|---|---|
| 5 | 19-22 | DQs HW/Quiz | Perimeter, Exponents, Area, Square Roots, Compasses, Prime Numbers, Prime Factorization, Fractions of a Group |
| 6 | 23-26 | DQs HW/Test | Subtracting Mixed Numbers with Regrouping, Fractions, Mixed Numbers |
| 7 | 27-30 | DQs HW/Quiz | Multiples, Word Problems, Rounding, Common Denominators |
| 8 | 31-34 | DQs HW/Journal | Coordinate Plane, Operations with Decimals, Metric System |
| 9 | 35-38 | DQs HW/Quiz | Operations with Decimals, Ratio, Simple Theoretical Probability, Area of a Triangle, Interpreting Graphs |
| 10 | 39-42 | DQs HW/Test | Proportions, Angle Measures of a Triangle, Stem & Leaf Plots, Box-&-Whisker Plots, Using Formulas, Distributive Property |
| 11 | 43-46 | DQs HW/Quiz | Decimals, Converting between Decimals-Fractions-Percents, Division, Unit Price/Rates/Sales Tax |
| 12 | 47-50 | DQs HW/Journal | Powers of 10, Converting between Decimals-Fractions-Percents, Adding Mixed Measures, Unit Multipliers & Unit Conversion |
| 13 | 51-54 | DQs HW/Quiz | Creating Graphs, Scientific Notation, Order of Operations, Multiplying Rates, Ratio Word Problems |
| 14 | 55-58 | DQs HW/Test | Averages, Subtracting Mixed Measures, Scientific Notation, Symmetry, Using Function Notation |
| 15 | 59-62 | DQs HW/Quiz | Adding Signed Numbers, Using the Percent Equation, Classifying Quadrilaterals, Area & Angles of Parallelograms |
| 16 | 63-64 | DQs HW/Quiz | Symbols of Inclusion, Adding Signed Numbers |
| 17 | | Final | No lecture |
| 18 | 65-67 | DQs HW/Quiz | Ratio, Circumference, Pi, Geometric Solids, |
| 19 | 68-70 | DQs HW/Quiz | Algebraic Addition, Scientific Notation, Volume, |
| 20 | 71-73 | DQs HW/Quiz | Balanced Equations, Finding the Whole, Implied Ratio, Multiplying & Dividing Signed Numbers |
| 21 | 74-77 | DQs HW/Journal | Fractional Parts of #s Area of a Complex Figure, Area of a Trapezoid, Complex Fractions, % of a Number, |
| 22 | 78-81 | DQs HW/Quiz | Graphing Inequalities, Comparisons, Transformations, Using a Compass, Using Proportions |
| 23 | 82-85 | DQs HW/Test | Area of a Circle, Operations with Scientific Notation, Algebraic Terms, Order of Operations, Functions |

| | | | |
|---|---|---|---|
| 24 | 86-89 | DQs HW/Quiz | Number Families, Multiplying Algebraic Terms, Unit Multipliers, Units of Area, Diagonals, Interior & Exterior Angles |
| 25 | 90-93 | DQs HW/Journal | Mixed-Number/Negative Coefficients, Graphing Functions, Signed Numbers, % of Change, Two-Step Equations |
| 26 | 94-97 | DQs HW/Quiz | Compound Probability, Volume of a Right Solid, Distributive Property, Similar Triangles |
| 27 | 98-101 | DQs HW/Test | Scales, Pythagorean Theorem, Estimating Square Roots, Irrational Numbers, Probability, Chance & Odds |
| 28 | 102-104 | DQs HW/Quiz | Translating into Equations, Transversals, Simplifying, Negative Numbers, Dividing, Semicircles/Arcs/Sectors |
| 29 | 105-108 | DQs HW/Journal | Surface Area of a Right Solid/Sphere, Roots, Solving Equations, Slope, Formulas |
| 30 | 109-111 | DQs HW/Quiz | Equations with Exponents, Interest, Scale Factors, Dividing in Scientific Notation |
| 31 | 112-114 | DQs HW/Test | Pythagorean Theorem, Volume of Pyramids/Cones/Spheres, Linear Inequalities |
| 32 | 115-117 | DQs HW/Quiz | Metric Volume/Capacity/Mass, Factoring Expressions, Slope-Intercept Forum |
| 33 | 118-120 | DQs HW/Quiz | Copying Angles/Triangles, Division by Zero, Graphing Non-Linear Equations |
| 34 | | Final | No lecture |

The Well-Trained Mind Academy
Saxon Algebra I

**Course Blackboard site:** http://wtma.blackboard.com

Required Materials:

- Saxon, John. *Algebra I: An Incremental Development.* Third Edition. Austin: Saxon Publishers, 2003.
    - ISBN 978-1-56577-134-5
- *MathXL for School*. Student course access provided by the Well-Trained Mind Academy.

Course Description:
Algebra I focuses on the essential principles of algebra. Topics include but are not limited to: linear equations, Cartesian coordinate system, introduction to polynomials and quadratics, rational expressions, factoring, introduction to systems of equations, radicals, basic set theory, introduction to function notation, surface area, right prisms and cylinders, pyramids and cones, ratios and proportion, scientific notation, introduction to statistics, Pythagorean theorem and triples, and transformations.

Prerequisite Skills: Expanding products of polynomials; simplifying polynomials; conversions from fractions to decimals; finding percents; solving linear equations; multiplying, dividing, and simplifying exponents; using ratios and rates, simplifying square roots, two-step word problems

MathXL for School: Most of the problem sets will be completed in MathXLforSchool. The Saxon textbook will be essential for understanding coursework, and students will need to make regular reference to the textbook. In order to safeguard student privacy, each student will be assigned a generic student account in MathXLforSchool. No personal or identifying information has been, or will be, shared with the MathXLforSchool system. Note that MathXLforSchool grades are not the course grade. MathXLforSchool is one tool used in this course.

Written Assignments:

- *Math Journal:* Students will write about their learning experience on a regular basis. 5% of final grade, total.
- *Weekly Discussion Questions*: Discussion questions will be drawn from the text. Each student must write a meaningful reply to the question by midnight, EST, Monday, and meaningfully respond to two other students' responses by midnight, EST, on Wednesday. See the Assignment policies for more information about meaningful participation. 5% of final grade, total.

Quizzes and Tests:

- *Weekly Quizzes:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Tests:* Students will complete problems drawn from the text as well as non-Saxon material. 12.5% of final grade, total.
- *Comprehensive Exams*: There will be two comprehensive exams. 17.5% of final grade each.

Other Assignments/Requirements:

- *Homework Problems*: Students will complete problems chosen from each chapter section. 30% of final grade, total.

Grading breakdown:

| *Course Work* | *Percentage* |
|---|---|
| Homework Problems | 30 |
| Weekly Quizzes | 12.5 |
| Tests | 12.5 |
| Discussion Questions | 5 |
| Math Journal | 5 |
| Comprehensive Final Exams—2 | 17.5 each (total 35%) |
| Total | 100 |

- *Math Formatting*: The object of the course is mathematics, not technology. Therefore, while the use of LaTeX, MathType, Geogebra, and other software tools is encouraged, it is not required. A LaTeX editor is built into Blackboard for student use. At certain points, students may be expected to demonstrate use of a straightedge and compass, unless a student's documented exceptionality prevents such assignments. If students choose to hand-sketch and hand-write assignments that do not require handwork (i.e., can be done with LaTeX, etc), easily legible handwriting is required. In addition, all assignments, whether created with software or drawn by hand, must be uploaded to Blackboard in digital format. Therefore, emailed or texted assignments will not be accepted.
- *Partial Credit/Showing Your Work*: Requirements vary by problem type. Students are not required to show their work for Homework and Weekly Quiz problems—however, if they do not show their work, and get the problem wrong, they cannot get partial credit. Partial credit is only given for Homework and Weekly Quiz problems when all work is shown. Test problems drawn from the book require that students show work in order to receive any credit.

Example Schedule:

| Week | Lessons | Assignment | Topic |
|---|---|---|---|
| 0 | -- | Introduction | Orientation |
| 1 | 1-3 | DQs<br>HW/Quiz | Adding and Subtracting Fractions, Lines and Segments, Angles, Polygons, Triangles, Quadrilaterals, Perimeter, Circumference |
| 2 | 4-7 | DQs<br>HW/Quiz | Arithmetic, Sets, Absolute Value, Adding Signed Numbers |
| 3 | 8-11 | DQs<br>HW/Quiz | Multiplying Signed Numbers, Inverse Operations, Dividing by Zero, Commutative Property, Area Conversion, Order of Operations |

| | | | |
|---|---|---|---|
| 4 | 12-15 | DQs<br>HW/Journal | Order of Operations, Evaluating Expressions, Surface Area |
| 5 | 16-19 | DQs<br>HW/Quiz | Evaluating Expressions, Factors, Coefficients, Like Terms, the Distributive Property, Exponents, Roots |
| 6 | 20-23 | DQs<br>HW/Test | Volume, Exponents, Like Terms, Expressions |
| 7 | 24-27 | DQs<br>HW/Quiz | Multiplicative Property, Solving Equations, Distributive Property |
| 8 | 28-31 | DQs<br>HW/Journal | Function Notation, Exponents, Algebraic Phrases |
| 9 | 32-33 | DQs<br>HW/Quiz | Word Problems, Prime Factorization |
| 10 | 34-37 | DQs<br>HW/Test | GCF, Factoring, Distributive Property, Canceling, Exponents, Inequalities |
| 11 | 38-41 | DQs<br>HW/Quiz | Ratios, Trichotomy Axiom, Exponents and Fractions |
| 12 | 42-45 | DQs<br>HW/Journal | Multivariable Equations, LCM, Rational Expressions with Unequal Denominators, Range, Median, Mode and Mean |
| 13 | 46-49 | DQs<br>HW/Quiz | Conjunctions, Polynomials |
| 14 | 50-53 | DQs<br>HW/Test | Polynomials, Cartesian Coordinate System, Linear Equations, Exponents, Volume Conversion |
| 15 | 54-57 | DQs<br>HW/Quiz | Simultaneous Equations by Substitution, Complex Fractions, Sets, Exponents |
| 16 | 58-59 | DQs<br>HW/Quiz | Word Problems, Solving Equations, Semester 1 Review |
| 17 | | Final | No lecture |
| 18 | 60-63 | DQs<br>HW/Quiz | Geometric Solids, Prisms, Cylinders, Subsets, Square Roots, Repeating Decimals |
| 19 | 64-67 | DQs<br>HW/Quiz | Domain, Inequality, Radical Expressions, Weighted Average |

| | | | |
|---|---|---|---|
| 20 | 68-71 | DQs<br>HW/Quiz | Complex Fractions, Factoring, Probability, Trinomials |
| 21 | 72-75 | DQs<br>HW/Journal | Factoring, Pyramids and Cones, Probability, Scientific Notation, Line Equations, Slope-Intercept |
| 22 | 76-79 | DQs<br>HW/Quiz | Word Problems, Rational Equations, Systems of Equations |
| 23 | 80-83 | DQs<br>HW/Test | Scientific Notation, Graphing Equations, Domain and Range, Coin Problems |
| 24 | 84-87 | DQs<br>HW/Quiz | Radicals, Functions, Graphing Statistics, Polynomials, Systems of Equations |
| 25 | 88-91 | DQs<br>HW/Journal | Quadratic Equations, Word Problems, Spheres |
| 26 | 92-95 | DQs<br>HW/Quiz | Word Problems, Rational Expressions, Graphing Functions |
| 27 | 96-99 | DQs<br>HW/Test | Difference of Two Squares, Triangles, Pythagorean Theorem, Point-Slope Formula, Uniform Motion |
| 28 | 100-104 | DQs<br>HW/Quiz | Place Value, Denominators, Absolute Value Inequalities, Rational Equations |
| 29 | 105-108 | DQs<br>HW/Journal | Rational Equations, Factoring by Grouping, Linear Equations |
| 30 | 109-112 | DQs<br>HW/Quiz | Radicals, Factoring, Transformations |
| 31 | 113-116 | DQs<br>HW/Test | Sets, Radicals, Variation, Exponential Functions, Linear Inequalities |
| 32 | 177-120 | DQs<br>HW/Quiz | Quotient Rule, Variation, Completing the Square, Quadratic Formula, Box-and-Whisker Plots |
| 33 | Review | DQs<br>HW/Quiz | Review |
| 34 | | Final | No lecture |

The Well-Trained Mind Academy
**Algebra II**

**Course Blackboard site: wtma.blackboard.com**

**Required Text:**

- Saxon, John H. *Algebra 2: An Incremental Development,* Third Edition. ISBN: 9781565771406

**Course Description**

This course offers a substantial review of all topics in Algebra I and then moves on to cover these topics at an advanced level. Major topics include the solving and graphing of linear and quadratic equations, factoring, a variety of types of word problems, solving quadratic equations by completing the square, solving simultaneous equations with fractions and decimals, complex roots of quadratic equations, solving systems of nonlinear equations, graphing and solving a system of inequalities, exponential equations, and review of key geometry, probability and statistics topics.

**Course Assignments**

Each week students will cover 3-4 lessons from the Saxon text and one weekly assignment that will be non-Saxon material, and will usually require some mathematical thinking and mathematical writing (not essays, but communicating mathematical thinking using words).

**Quizzes, Tests and Grading**

A normal weekly routine will include:
Daily Homework from Saxon-(worth 10% of grade)
Weekly Homework assignments (worth 20% of grade)
Short quiz on Wednesday during class (worth 10% of grade)
Chapter tests every 2-3 weeks (30% of grade)
Final Exams (30% of grade)

**Grading and Correcting**

Students check their own answers to the daily Saxon assignments so they know right away whether they are understanding the problems and getting correct answers. Students will use the answer book for their own good, and not for copying answers. For daily work, grades are given for completion (showing all work), so there should be no need to copy answers for the sake of a grade. Weekly assignments and tests will be created and scored by the instructor, and students will not have access to the answers at home.

**Other Assignments/Requirements**

Students will need to keep a notebook where they file their notes and completed assignments. This will not be graded, but it is an expectation for the class and should be shown to parents regularly. The more organized you keep your work, the easier it will be to use it. Most quizzes will allow notes, so it is important to take good notes and keep them organized.

**Calculator Policy**

A graphing calculator is NOT required for this course, but is highly recommended. I will provide links to online graphing calculators that students will be able to access. By the time a student gets to Algebra they should be competent in basic math facts and computations without the use of calculators, but calculators speed up the work and allow students to take it to a deeper level. Use of a calculator does not excuse the students from writing the steps involved in solving problems. Problems that include only an answer may be counted as incorrect. Resources can be provided for students who are not yet proficient with math facts and who need extra review.

**Example Schedule**

| | |
|---|---|
| Week 1 | Saxon Lessons 1-4 |
| Week 2 | Saxon Lessons 5-8 |
| Week 3 | Saxon Lessons 9-12 |
| Week 4 | Saxon Lessons 13-16 |
| Week 5 | Saxon Lessons 17-19 |
| Week 6 | Saxon Lessons 20-22 |
| Week 7 | Saxon Lessons 23-26 |
| Week 8 | Saxon Lessons 27-30 |
| Week 9 | Saxon Lessons 31-34 |
| Week 10 | Saxon Lessons 35-38 |
| Week 11 | Saxon Lessons 39-42 |
| Week 12 | Saxon Lessons 43-46 |
| Week 13 | Saxon Lessons 47-50 |
| Week 14 | Saxon Lessons 51-53 |
| Week 15 | Saxon Lessons 54-56 |
| Week 16 | Saxon Lessons 57-60 |
| Week 17 | Saxon Lessons 61-64 |
| Week 18 | Saxon Lessons 65-68 |
| Week 19 | Saxon Lessons 69-71 |
| Week 20 | Saxon Lessons 72-75 |
| Week 21 | Saxon Lessons 76-78 |
| Week 22 | Saxon Lessons 79-82 |
| Week 23 | Saxon Lessons 83-86 |
| Week 24 | Saxon Lessons 87-90 |
| Week 25 | Saxon Lessons 91-94 |
| Week 26 | Saxon Lessons 95-98 |
| Week 27 | Saxon Lessons 99-102 |
| Week 28 | Saxon Lessons 103-105 |
| Week 29 | Saxon Lessons 106-109 |
| Week 30 | Saxon Lessons 110-112 |
| Week 31 | Saxon Lessons 113-116 |
| Week 32 | Saxon Lessons 117-120 |
| | Exam Week |

**The Well-Trained Mind Academy**
**Geometry (Saxon)**

**Course Blackboard site:** wtma.blackboard.com

**Required Materials:**

- Saxon Geometry Student Edition: 978-1602773059
- *MathXL for School*. Student course access provided by the Well-Trained Mind Academy.

**Course Description:**
Students learn the foundations of geometry. The course covers geometric foundations, logic and reasoning, construction, coordinate geometry, triangles: congruence and similarity, polygons, quadrilaterals, right triangles and an introduction to trigonometry, circles, solids, and transformations. Students will write proofs as a part of the course.

**Course Assignments:**
Each week we will cover between four and five lessons from the Saxon text. In addition to specifically assigned problems as featured in each lesson, additional projects will be provided with the goal of putting geometry in the context of everyday life.

MathXL for School: Most of the problem sets will be completed in MathXLforSchool. The Saxon textbook will be essential for understanding coursework, and students will need to make regular reference to the textbook. In order to safeguard student privacy, each student will be assigned a generic student account in MathXLforSchool. No personal or identifying information has been, or will be, shared with the MathXLforSchool system. Note that MathXLforSchool grades are not the course grade. MathXLforSchool is one tool used in this course.

Participation/Attendance: Students will complete regular journal or video entries to check in with the instructor regarding content.

Homework: Weekly homework assignments will be provided using Math XL which provides for multiple attempts without penalty. Students should expect to complete between 100 – 150 problems per week on Math XL.

Quizzes: Weekly quizzes will evaluate mastery of new concepts. Quizzes will be completed on Blackboard.

Tests/Exams: Periodic tests will evaluate progress. Tests are cumulative and consist of about 20 questions.

Projects/Investigations: Students will complete projects/lab/investigations to allow students to see the interactivity of geometry and real life.

**Grading:**

Breakdown:

Participation/Attendance - 15%

Homework – 35%

Quizzes – 15%

Tests – 20%

Projects/Investigations – 15%

**Note: Students must be able to save and upload documents to Blackboard in PDF format.**

The Well-Trained Mind Academy
**Saxon Pre-Calculus**

**Course Blackboard site: wtma.blackboard.com**

**Required Materials:**
Saxon Advanced Math Second Edition Homeschool Kit. ISBN: 978-1565771277

**Course Description**
Saxon Pre-Calculus fully integrates topics from algebra, geometry, trigonometry, discrete mathematics, and mathematical analysis. Word problems are developed throughout the problem sets and become progressively more elaborate. With this practice, high-school-level students will be able to solve challenging problems such as rate problems and work problems involving abstract quantities. Conceptually oriented problems that help prepare students for college entrance exams (such as the ACT and SAT) are included in the problem sets.

**Course Assignments**
Each week students will cover 3-4 lessons from the Saxon text and one weekly assignment that will be non-Saxon material and will usually require some mathematical thinking and mathematical writing (not essays, but communicating mathematical thinking using words).

**Quizzes, Tests and Grading**
A normal weekly routine will include:
Daily Homework from Saxon (worth 10% of grade)
Weekly Homework assignments (worth 20% of grade)
Short quiz on Wednesday during class (worth 10% of grade)
Chapter tests every 2-3 weeks (30% of grade)
Final Exams (30% of grade)

**Grading and Correcting**
I run this course under the assumption that the student wants to learn the material and will actively seek help with their questions. I would like students to check their own answers to the daily Saxon assignments so they know right away whether they are understanding problems and getting correct answers. My assumption is that students will use the answer book for their own good, and not for copying answers. For daily work, I give grades for completion (showing all work), and so there should be no need to copy answers for the sake of a grade. Weekly assignments and tests will be created and scored by me, and students will not have access to the answers at home.

**Other Assignments/Requirements**
Students will need to keep a notebook where they file their notes and completed assignments. This will not be graded, but it is an expectation for the class and should be shown to parents regularly. The more organized you keep your work, the easier it will be to use it. Most quizzes will allow notes, so it is important to take good notes and keep them organized.

**Calculator Policy**

A graphing calculator is NOT required for this course, but is highly recommended. I will provide links to online graphing calculators that students will be able to access. By the time a student gets to this course they should be competent in basic math facts and computations without the use of calculators, but calculators speed up the work and allow students to take it to a deeper level. Use of a calculator does not excuse the students from writing the steps involved in solving problems. Problems that include only an answer may be counted as incorrect. Resources can be provided for students who are not yet proficient with math facts and who need extra review.

**Example Schedule**

| | |
|---|---|
| Week 1 | Saxon Lessons 1-4 |
| Week 2 | Saxon Lessons 5-8 |
| Week 3 | Saxon Lessons 9-12 |
| Week 4 | Saxon Lessons 13-16 |
| Week 5 | Saxon Lessons 17-19 |
| Week 6 | Saxon Lessons 20-22 |
| Week 7 | Saxon Lessons 23-26 |
| Week 8 | Saxon Lessons 27-30 |
| Week 9 | Saxon Lessons 31-34 |
| Week 10 | Saxon Lessons 35-38 |
| Week 11 | Saxon Lessons 39-42 |
| Week 12 | Saxon Lessons 43-46 |
| Week 13 | Saxon Lessons 47-50 |
| Week 14 | Saxon Lessons 51-53 |
| Week 15 | Saxon Lessons 54-56 |
| Week 16 | Saxon Lessons 57-60 |
| ***Exam Week*** | |
| Week 17 | Saxon Lessons 61-64 |
| Week 18 | Saxon Lessons 65-68 |
| Week 19 | Saxon Lessons 69-71 |
| Week 20 | Saxon Lessons 72-75 |
| Week 21 | Saxon Lessons 76-78 |
| Week 22 | Saxon Lessons 79-82 |
| Week 23 | Saxon Lessons 83-86 |
| Week 24 | Saxon Lessons 87-90 |
| Week 25 | Saxon Lessons 91-94 |
| Week 26 | Saxon Lessons 95-98 |
| Week 27 | Saxon Lessons 99-102 |
| Week 28 | Saxon Lessons 103-105 |
| Week 29 | Saxon Lessons 106-109 |
| Week 30 | Saxon Lessons 110-112 |
| Week 31 | Saxon Lessons 113-116 |
| Week 32 | Saxon Lessons 117-120 |
| ***Exam Week*** | |