

MTH102: ALGEBRA II W/Beginning TRIG

THIS COURSE REQUIRES A FINAL EXAM

SYLLABUS

READ THESE INSTRUCTIONS NOW!

Keep work organized by week, clearly labeled and typed or copy/paste onto your syllabus. Math and hand done projects: photograph, scan or screenshot and copy/paste to your syllabus. Keep images small so your file isn't too large to submit or save work as a PDF. Go to "Student Services" online for any issues with this course. If you need Microsoft Word, request an email from Student Services and follow the steps given to you.

- **SUBMITTING WORK:** YOU MUST SUBMIT ALL WEEKS AT ONCE on one file. Your syllabus may be submitted separately if you chose not to add your work to it. Go to the website and select "Submit Work", complete the form and attach your work. You may also share a public link such as Gdocs. You have two attempts at receiving a passing grade of "C" or better so submit your full effort original work. Do not mail work. You will receive a reply in about 5 business days. Do not call or email asking for us to verify your work. All components of your course must be completed by the end of the 8th week from the time of your registration; 12 weeks for a 2 credit class. If you have a medical emergency or disability preventing you from completing your class, contact "Student Services" and send an email to request up to a 2-week extension

WELCOME TO ALGEBRA II

TEXTBOOK: IOHS ALG II TXT

YOUR WORK: For each week, you may do as much work as you choose, but only submit the work requested.

TYPE YOUR FINAL ANSWERS TO THIS DOCUMENT. Submit all weeks at once by following the instructions at the top of this document. If you have scans or photos, paste them to this document as well.

GRAPHING CALCULATOR: Go to "Homework Help" on the school's menu for online graphing tools.

WEEK ONE

THIS WEEK'S SUPPORT VIDEOS

Absolute Value: <https://www.khanacademy.org/math/arithmetic/arith-review-negative-numbers/arith-review-abs-value/v/absolute-value-of-integers>

Absolute Value Equations Video and Lessons: <https://www.khanacademy.org/math/algebra-home/alg-absolute-value/alg-absolute-value-equations/v/absolute-value-equations>

Functions & Ordered Pairs: <https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th->

[linear-equations-functions/cc-8th-function-intro/v/relations-and-functions](https://www.khanacademy.org/math/algebra-home/alg-linear-eq-func)

Linear Equations, Graphing, Slopes – Videos and Lessons:

<https://www.khanacademy.org/math/algebra-home/alg-linear-eq-func>

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Page 9: Solutions of Absolute Value Equations: Submit 1 – 15

Page 10: Solutions of Absolute Value Inequalities: Submit 1 – 4; 8 – 10

Page 12: Functions as Ordered Pairs: Submit 1 – 10

Page 13: Functions as a Rule: Submit 1 – 20

Page 14: Zero's of a Function: Submit 1 – 8

Page 15: Graphs of Linear Functions: Submit 1 – 8

Page 16: The Slope of a Line – Parallel: Submit 1 – 5; 25

Page 17: The Formula $f(x) = y = mx + b$: Submit: 12 - 18

ADD RESPONSES HERE

WEEK TWO

THIS WEEK'S SUPPORT VIDEOS

Reading Line Graphs: <https://www.khanacademy.org/math/statistics-probability/displaying-describing-data/more-on-data-displays/v/u08-l1-t2-we2-reading-line-graphs>

Slopes & Graphs Lessons: <https://www.khanacademy.org/math/algebra/two-var-linear-equations/slope/v/slope-of-a-line>

<https://www.khanacademy.org/math/algebra/two-var-linear-equations/writing-slope-intercept-equations/v/equation-of-a-line-1>

Writing Linear Equations: <https://www.khanacademy.org/math/algebra/two-var-linear-equations/forms-of-two-var-linear-equations/v/point-slope-and-standard-form>

Factoring Perfect Squares: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-perfect-squares/v/factoring-perfect-square-trinomials>

Trinomials: <https://www.khanacademy.org/math/algebra/polynomial-factorization/factoring-quadratics-2/v/factoring-trinomials-by-grouping-4>

Quadratic Formula: <https://www.khanacademy.org/math/algebra/quadratics/solving-quadratics->

[using-the-quadratic-formula/v/using-the-quadratic-formula](#)

Complex Roots: <https://www.khanacademy.org/math/algebra2/polynomial-functions/quadratic-equations-with-complex-numbers/v/complex-roots-from-the-quadratic-formula>

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Page 18: Reading Line Graphs: Slopes of Lines: Submit 4 – 8

Page 19: Writing Equations of Lines: Submit 18 – 24

Page 20: Graphs of $y < mx + b$, $y > mx + b$: Submit 4 – 8

Page 21: Geometry Connection: Lines: Submit 3, 5

Page 27: Trinomials – Completing the Square: Submit 8 – 14

Page 28: Solutions by Completing the Square: Submit 1, 2, 7, 9

Page 29: The Quadratic Formula: Submit 9 – 13

Page 30: Complex Roots: Submit 7 – 14

ADD RESPONSES HERE

WEEK THREE

THIS WEEK'S SUPPORT VIDEOS

Quadratic Functions: <https://www.khanacademy.org/math/algebra/quadratics/features-of-quadratic-functions/v/rewriting-a-quadratic-function-to-find-roots-and-vertex>

Word Problems – Linear Equations: <https://www.khanacademy.org/math/algebra/one-variable-linear-equations/alg1-linear-eq-word-probs/v/basic-linear-equation-word-problem>

Axis of Symmetry: <https://www.khanacademy.org/math/basic-geo/basic-geo-transformations-congruence/line-of-symmetry/v/axis-of-symmetry>

Polynomials: Lessons: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/introduction-to-polynomials/v/polynomials-intro>

Adding & Subtracting Polynomials: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/adding-and-subtracting-polynomials/v/adding-and-subtracting-polynomials-1>

Two Variables: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/add-subtract-poly-two-var/v/example-adding-polynomials-with-multiple-variables>

Multiplying Monomials: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-monomials/v/multiplying-monomials>

[expressions/multiplying-monomials/v/multiply-monomials-intro](https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-monomials/v/multiply-monomials-intro)

Multiplying Monomials by Polynomials:

<https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-polynomials-by-monomials/v/area-model-of-monomial-polynomial-multiplication>

Binomials: <https://www.khanacademy.org/math/algebra/introduction-to-polynomial-expressions/multiplying-binomials-2/v/area-model-for-multiplying-binomials>

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Page 31: Geometry Connection Areas: Submit 1 – 3

Page 32: $f(x) = ax^2 = bx + c$, Quadratic Functions: Submit 1, 2

Page 33: Graphing $f(x) = ax^2$ and $f(x) = -ax^2$: Submit 4 & 6

Page 39: Word Problems and Linear Equations: Submit 1 – 10

Page 40: Geometry Connection: Axis of Symmetry: Submit 1 – 5

Page 41: Definitions, Additions: Submit 3 – 6

Page 42: Products: Submit 7 – 14

Page 43: Factoring: Submit 4 – 9

Page 44: Multiplication of Polynomials: Submit 6 -12

ADD RESPONSES HERE

WEEK FOUR

THIS WEEK'S SUPPORT VIDEOS

Long Division of Polynomials: <https://www.khanacademy.org/math/algebra2/arithmic-with-polynomials/long-division-of-polynomials/v/polynomial-division>

Dividing Polynomials II: <https://www.khanacademy.org/math/algebra2/arithmic-with-polynomials/practice-dividing-polynomials-with-remainders/e/divide-polynomials-by-monomials>

Simplifying Rational Expressions: <https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/simplify-rational-expressions/v/simplifying-rational-expressions-introduction>

Adding & Subtracting Rational Expressions:

<https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and->

[functions/adding-and-subtracting-rational-expressions/v/adding-and-subtracting-rational-expressions-with-like-denominators](https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/adding-and-subtracting-rational-expressions/v/adding-and-subtracting-rational-expressions-with-like-denominators)

Multiplying & Dividing Rational Expressions:

<https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/multiplying-and-dividing-rational-expressions/v/multiplying-and-dividing-rational-expressions-2>

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Page 45: Division of Polynomials: Submit 8 – 14

Page 46: Long Division of Polynomials: Submit 3 – 7

Page 47: Complex Fractions: Submit 1 – 5

Page 48: Geometry Connection: Perimeter Formulas: Submit 3, 6, 9

Page 49: Simplifying Rational Expressions: Submit 3, 6, 8, 12, 16, 20

Page 50: Adding and Subtracting Rational Expressions: Submit 4, 7, 9, 12, 15, 18

Page 51: Multiplying Rational Expressions: Submit 3, 7, 9, 15

Page 52: Dividing Rational Expressions: Submit 1, 6, 11, 14

Page 53: Geometry Connection: Similar Figures: Submit 1 – 6

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WEEK FIVE

THIS WEEK'S SUPPORT VIDEOS

Radicals: <https://www.khanacademy.org/math/algebra-home/alg-exp-and-log/miscellaneous-radicals/v/adding-and-simplifying-radicals>

Fractional Exponents: <https://www.khanacademy.org/math/algebra/rational-exponents-and-radicals/rational-exponents-intro/v/basic-fractional-exponents>

<https://www.khanacademy.org/math/algebra/rational-exponents-and-radicals/alg1-rational-exp-eval/v/fractional-exponents-with-numerators-other-than-1>

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Page 54: Positive Powers: Submit 4, 7, 9, 11, 14

Page 55: Negative Exponents: Submit 1, 6, 7, 10, 14

Page 56: Roots and Powers: Submit 1, 4, 6, 9, 15

Page 57: Operations with Radicals: Submit 2, 7, 9, 12, 18

Page 58: Radical Equations: Submit 3, 8, 12, 14

Page 59: Fractional Exponential Notation: Submit 1, 6, 10, 13, 17, 18

Page 60: Radicals in Fractions: Submit 1, 2, 8, 14, 15

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WEEK SIX

THIS WEEK'S SUPPORT VIDEOS

Writing & Translating Problems: <https://www.khanacademy.org/math/cc-fifth-grade-math/cc-5th-algebraic-thinking/cc-5th-writing-expressions-tut/v/evaluating-an-expression-with-and-without-parentheses>

Intro to Logarithms Lessons: <https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/introduction-to-logarithms/v/logarithms>

Probability: <https://www.khanacademy.org/math/statistics-probability/probability-library/probability-sample-spaces/v/events-and-outcomes-3>

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Page 62: Rational Numbers and Decimals: Submit 2, 6, 11, 15

Page 67: Scientific Notations: Using Powers of Ten: Submit 6 – 15

Page 68: Exponential Equations: Submit 2, 4, 8, 11, 12

Page 71: Translations of Exponents & Logarithms: Submit 6 – 15

Page 72: Logarithmic Functions & Their Properties: Submit 6 – 12, 18 & 20

Page 73: Logarithmic Equations: Submit 9 – 15

Page 101: Basic Probability: Submit 1 – 10

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