



Dominican International School

台北市私立道明外僑學校

No. 76, Dazhi Street, Taipei (104042), Taiwan, R.O.C.

10464 臺北市中山區大直街 76 號



COURSE SYLLABUS

School Year	2025-2026
Subject	Algebra 2
Grade Level	10
Teacher	Joanne Ward
Email	jward@dishs.tp.edu.tw

COURSE DESCRIPTION:

Algebra 2 builds on the concepts covered in Algebra 1 and Geometry. The course covers advanced algebraic concepts and provides a foundation for higher-level mathematics courses. Topics include polynomial expressions, equations and functions, rational expressions, complex numbers, logarithms, sequences and series, and an introduction to trigonometry

COURSE OBJECTIVES: By the end of the semester/school year, (SWAT) Students will be able to:

- Perform operations on polynomial, rational, and radical expressions.
- Solve various types of equations and inequalities.
- Analyze and graph polynomial, rational, exponential, and logarithmic functions.
- Understand and apply the concepts of sequences and series.
- Use trigonometric identities to solve problems.

Apply algebraic concepts to real-world scenarios

PRIMARY TEXTBOOKS AND OTHER RESOURCES:

Larson, R., & Boswell, L. (2022). *Big Ideas Math: Algebra 2*. Big Ideas Learning.

Students are required to bring laptops to class and will use following teacher's instructions.

Scientific calculators may be used if instructed by the teacher.

GRADING SYSTEM/ASSESSMENT:

- Tests and Quizzes: 30%
- Homework, Seatwork, and Projects: 30%
- Quarter Exam: 30%
- Deportment: 10%

ADDITIONAL INFORMATION:

Please always check Google Classroom for homework and announcements.

ACADEMIC DISHONESTY:

Academic Dishonesty means employing a method or technique or engaging in conduct



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in an academic endeavor that contravenes the standards of ethical integrity expected at DIS.

Academic dishonesty includes but is not limited to the following:

- Purposely incorporating the ideas, words of sentences, paragraphs, or parts thereof without appropriate acknowledgment and representing the product as one's work;
- Representing another's intellectual work, such as photographs, paintings, drawings, sculpture, research, or the like, as one's own, including failure to attribute content to an AI.
- Employing a tutor, using Artificial Intelligence without acknowledgment, getting a parent to write a paper or do an assignment, and paying for an essay to be written by someone else and presented as the student's work.
- Committing any act that a reasonable person would conclude, when informed of the evidence, to be a dishonest means of obtaining or attempting to obtain credit for academic work.

Any act of academic dishonesty will result in an automatic zero on the entire assignment/learning task.

First Quarter Tentative Course Content

Week/Date	Topic/Projects/Assessments
Week 1 (August 12 to 15) <u>4 days of class</u> 12-General Assembly at the Gymnasium 15-Opening Mass & Assumption of Our Lady	1.1: Parent Functions and Transformations 1.1: Parent Functions and Transformations 1.1: Parent Functions and Transformations 1.2: Transformations of Linear and Absolute Value Functions 1.2: Transformations of Linear and Absolute Value Functions
Week 2 (August 18 to 22) 18-St. Dominic de Guzman Feast Day Celebration) Integrated during the Monday Assembly 20- House Shirt & Blue Jeans Day Starts 22- Club Orientation and Club Sign-up	1.2: Transformations of Linear and Absolute Value Functions 1.3: Modeling with Linear Functions 1.3: Modeling with Linear Functions 1.4: Solving Linear Systems 1.4: Solving Linear Systems
Week 3 (August 25 to 29) 27- High School Talk - "Kickstart Your Success: Winning Mindsets for a Great School Year" 29- First Club Meeting	Ch1 Review Ch1 Test 2.1: Transformations of Quadratic Functions 2.1: Transformations of Quadratic Functions



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	2.2: Characteristics of Quadratic Functions
Week 4 (September 1 to 5) 1- Launching of the World Day of Prayer for the Care of Creation (During the Monday Assembly) 1-AP Registration 3- AEO Fall University Fair 5- House Ceremony	2.2: Characteristics of Quadratic Functions 2.3: Focus of a Parabola 2.3: Focus of a Parabola 2.4: Modeling with Quadratic Functions 2.4: Modeling with Quadratic Functions
Week 5 (September 8 to 12) 8- Holy Mass: Nativity of the Blessed Virgin Mary & VIP Induction 10- House Mini Games Start	3.1: Solving Quadratic Equations 3.1: Solving Quadratic Equations 3.1: Solving Quadratic Equations 3.1: Solving Quadratic Equations 3.2: Complex Numbers
Week 6 (September 15 to 19) 15- Catholic Bridge Program for all New Students (After the Monday Assembly at the Gymnasium) 19- Athletics / Sports Orientation 19- PSAT/NMSQT Registration deadline	3.2: Complex Numbers
Week 7 (September 22 to 26) 22- Celebration of the International Day of Peace-Peace Pole Ceremony (During the Monday Assembly) Teacher's Day Celebration & 26- Teachers' Appreciation 26- Grade 12 Career Educational Trip 24 to 26-Pre-Exam Days	3.3: Completing the Square 3.4: Using the Quadratic Formula 3.4: Using the Quadratic Formula 3.4: Using the Quadratic Formula 3.5: Solving Nonlinear Systems of Equations
Week 8 (September 29 to October 3) 29- Launching of the Month of the Holy Rosary (During the Monday	3.5: Solving Nonlinear Systems of Equations 3.6: Quadratic Inequalities



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Assembly) Oct. 1-2- First Quarter Exam (half day)	3.6: Quadratic Inequalities Ch3 Test Ch1-3 Review
<i>Oct. 3-DIS Teachers and Staff Recognition Day/ Record Day Recollection for Aunties and Uncles (no classes for students)</i>	

Second Quarter Tentative Course Content

Week/Date	Topic/Projects/Assessments
<i>6-Moon Festival (no classes)</i>	
<i>7-9 Teacher's Conference (no classes)</i>	
Week 1 (11) (October 13 to 17) 13- Second Quarter Begins 13- Start of New Applicant Enrollment for 2nd Semester 14- Visit of Mother Mary to Classrooms (During the morning prayer) 15- AP Exam Only Registration Deadline 15- Monthly Career Talk - College Prep 17- PSAT/NMSQT Digital Exam	4.1: Graphing Polynomial Functions 4.1: Graphing Polynomial Functions 4.2: Adding, Subtracting, and Multiplying 4.2: Adding, Subtracting, and Multiplying 4.3: Dividing Polynomials
Week 2 (12) (October 20 to 24) 20- Jubilee: Marian Exhibit Opening (After the Monday Assembly) 20- Campus Safety Talk for Students 24- Book Fair (Senior Escape Room)	4.4: Factoring Polynomials 4.4: Factoring Polynomials 4.5: Solving Polynomial Equations 4.5: Solving Polynomial Equations 4.6: The Fundamental Theorem of Algebra
Week 3 (13) (October 27 to 31) 29- Grade 11 Career Educational Trip Oct. 31 to Nov. 1- Gr.6 SEL Camp	10-28-2024 4.6: The Fundamental Theorem of Algebra 4.7: Transformations of Polynomial Functions 4.7: Transformations of Polynomial Functions 4.8: Analyzing Graphs of Polynomial Functions



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	4.8: Analyzing Graphs of Polynomial Functions
Week 4 (14) (November 3 to 7) 3- Feast of St. Martin de Porres Mass (integrated during the Monday Assembly) 5- Monthly Career Talk - College Prep	4.8: Analyzing Graphs of Polynomial Functions 4.9: Modeling with Polynomial Functions Ch4 Test 5.1: n th Roots and Rational Exponents 5.2: Properties of Rational Exponents and Radicals
Week 5 (15) (November 10 to 14) 14- Health Week 14- VIP-Parent Learning Community	5.2: Properties of Rational Exponents and Radicals 5.3: Graphing Radical Functions 5.3: Graphing Radical Functions 5.4: Solving Radical Equations and Inequalities 5.4: Solving Radical Equations and Inequalities
Week 6 (16) (November 17 to 21) 17- Launching of Mental Health and Anti-Bullying Month 21- Young Shakespeare Play Writing and Performing Contest	5.5: Performing Function Operations 5.6: Composition of Functions Ch5 Test 6.1: Exponential Growth and Decay Functions 6.1: Exponential Growth and Decay Functions
Week 7 (17) (November 24 to 28) 24- Peace Pole Day (Monday Assembly) 24- Lighting of the Christmas Tree after school (Campus Min/ ECA/ D' Torch Orchestra/ Religious Studies) (Afternoon) 25-27- Pre-Exam Days 27- Thanksgiving Potluck after school for teachers and staff 27- Thanksgiving Family Day 28- Gr. 12 Second Quarter Exam	6.2: The Natural Base e 6.3: Logarithms and Logarithmic Functions 6.3: Logarithms and Logarithmic Functions 6.4: Transformations of Exponential and Logarithmic Functions 6.4: Transformations of Exponential and Logarithmic Functions
Nov. 29 Invitation for All: The Jubilee Pilgrimage to Taipei (Saturday)	



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Week 8 (18) (December 1 to 5) 1- First Week of Advent: Lighting of First Advent Candle (During the Monday Assembly) 3- Monthly Career Talk - College Prep 5- Nativity Play (Collaboration with Campus Ministry) 5- Christmas Fair Whole Day	6.5: Properties of Logarithms 6.6: Solving Exponential and Logarithmic Equations 6.6: Solving Exponential and Logarithmic Equations Ch6 Test Ch4 Review
Week 9 (19) (December 8 to 12) 8- Foundation Day Mass, cake ceremony, and Class Party (half day) 8- Solemnity of the Immaculate Conception 8- Second Week of Advent 10- Gr. 12 Advent Immersion 11 and 12- Second Quarter Exam (half day)	Ch5 Review Ch6 Review Q2Exam
<i>December 13 Invitation for All: Advent Recollection @DIS (Saturday)</i>	
<i>December 15 to January 2 Christmas Break</i>	

Third Quarter Tentative Course Content

Week/Date	Topic/Projects/Assessments
<i>January 5- Record Day (No Classes for students)</i>	
Week 1 (20) (January 5 to 9) 5- PSAT 8/9 Registration Starts 6- Third Quarter Begins 7- Monthly Career Talk-College Prep 9- New Year Mass at 8:00	7.1: Inverse Variation 7.2: Graphing Rational Functions 7.2: Graphing Rational Functions 7.3: Multiplying and Dividing Rational Expressions 7.3: Multiplying and Dividing Rational Expressions
Week 2 (21) (January 12 to 16) 16- Club Orientation & Sign Up	7.3: Multiplying and Dividing Rational Expressions 7.4: Adding and Subtracting Rational Expressions 7.4: Adding and Subtracting Rational Expressions



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	7.5: Solving Rational Equations 7.5: Solving Rational Equations
Week 3 (22) (January 19 to 23) 19-23- Individual Yearbook Photoshoot for Students 19-23- Career Awareness Week 22- Grade 9 Career Educational trip 23- First Club Meeting for 2nd Semester	7.5: Solving Rational Equations Ch7 Test 8.1: Sample Spaces and Probability 8.1: Sample Spaces and Probability 8.2: Two-Way Tables and Probability
Week 4 (23) (January 26 to 30) 26- Feast Day of St. Thomas Aquinas/Launching of the Catholic Week 26-28- Aquinas Conference: Science and Faith 26-30- Catholic Week Activities 30- DYM Charity Concert	8.2: Two-Way Tables and Probability 8.3: Conditional Probability 8.3: Conditional Probability 8.4: Independent and Dependent Events 8.4: Independent and Dependent Events
Week 5 (24) (February 2 to 6) 1-4- WASC Mid-Cycle Visit 4- Monthly Career Talk - College Prep 6-7- SUA0 Recollection for MS	8.5: Probability of Disjoint and Overlapping Events 8.6: Permutations and Combinations 8.6: Permutations and Combinations 8.6: Permutations and Combinations 8.7: Binomial Distributions
Week 6 (25) (February 9 to 13) 9- Start of New Applicant Enrollment for 1st Semester for SY2025-26 13- PSAT 8/9 Registration Deadline 13- House Valentine's Mini Fair 13- Chinese New Year Celebration	9.1: Using Normal Distributions 9.1: Using Normal Distributions 9.2: Populations, Samples, and Hypotheses 9.3: Collecting Data
February 16-20 Chinese New Year Holiday	



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Week 7 (26) (February 23 to 26) 23-26- IOWA Assessments 23- Student Council Application 24-26- Pre-Exam Days	9.3: Collecting Data 9.4: Experimental Design 9.5: Making Inferences from Sample Surveys 9.5: Making Inferences from Sample Surveys
<i>February 27 Memorial Day Holiday (no classes)</i>	
Week 8 (27) (March 2 to 6) 3- Monthly Career Talk - College Prep 6- PSAT 8/9 System Installation and Practice Test	9.5: Making Inferences from Sample Surveys 9.6: Making Inferences from Experiments Ch9 Review Ch9 Test 10.1: Right Triangle Trigonometry
Week 9 (28) (March 9 to 13) 13 and 16- Third Quarter Exam (half day)	10.1: Right Triangle Trigonometry 10.2: Angles and Radian Measure Ch7-9 Review Q3Exam

Fourth Quarter Tentative Course Content

Week/Date	Topic/Projects/Assessments
Week 1 (29) (March 16 to 20) 16- Third Quarter Exam (half day) 16-20- Faculty & Staff Yearbook Photo 17- Fourth Quarter Begins 18-21- EARCOS Teachers' Conference 19- Lectio Divina and Feast of St. Joseph 20- Parents Learning Community Meeting 20- Kindilympics 20-House Movie Night and Club Fair	10.2: Angles and Radian Measure 10.3: Trigonometric Functions of Any Angle 10.3: Trigonometric Functions of Any Angle 10.4: Graphing Sine and Cosine Functions
<i>March 21 (Saturday) Spring Fair</i>	



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Week 2 (30) (March 23 to 27) 23-27 Student Leaders Applicant Interviews 26- Annual Visit to World Religion Museum Gr. 11 27- Lower School Readers Theatre	10.4: Graphing Sine and Cosine Functions 10.4: Graphing Sine and Cosine Functions 10.5: Graphing Other Trigonometric Functions 10.5: Graphing Other Trigonometric Functions 10.6: Modeling with Trigonometric Functions
<i>March 30 to April 6 Easter/Spring Break</i>	
Week 3 (31) (April 7 to 10) 7- Spring University Fair 9- Easter Mass 9- Easter Egg Hunt for Lower School Students	10.7: Using Trigonometric Identities 10.8: Using Sum and Difference Formulas Ch10 Test
Week 4 (32) (April 13 to 17) 13 Laudato Si Month Launching (During the Monday Assembly) 13-30 Laudato Si Month Activities 13-17- Class Photo Taking 17- AP Chinese/Japanese Practice Test	11.1: Defining and Using Sequences and Series 11.1: Defining and Using Sequences and Series 11.2: Analyzing Arithmetic Sequences and Series 11.2: Analyzing Arithmetic Sequences and Series 11.3: Analyzing Geometric Sequences and Series
Week 5 (33) (April 20 to 24) 20-24 Cultural Awareness Week / Art Exhibit / Earth Week 24- Music Recital 20-24 Student Council Campaign 20-24 AP Mock Exams	11.3: Analyzing Geometric Sequences and Series 11.4: Finding Sums of Infinite Geometric Series 11.5: Using Recursive Rules with Sequences 11.5: Using Recursive Rules with Sequences 11.5: Using Recursive Rules with Sequences
Week 6 (34) (April 27 to 30) 27- Student Council Elections 27-30 Senior Project Presentations 28-30 Pre-Exam Days	11.5: Using Recursive Rules with Sequences Ch11 Test 12.1: Basic Matrix Operations 12.2: Multiplying Matrices



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	12.3: Determinants and Cramer's Rule
<i>May 1: Labor Day Public Holiday</i>	
Week 7 (35) (May 4 to 8) 4- May Crowning & Mother's Day Celebration (During the Monday Assembly) 4-14 Final Exams (K, Gr. 5, 8, & 12 Only) 4-15 AP Exams	12.3: Determinants and Cramer's Rule 12.3: Determinants and Cramer's Rule 12.4: Inverse Matrices Ch12 Test Ch9-10 Review
Week 8 (36) (May 11 to 15) 13 and 14- Fourth Quarter Exam—Undergraduate (half day) 14-16 Student Leaders Retreat Days	Ch12 Review Q4Exam
<i>May 15 Record Day (No Classes for students) Final Deliberation for Graduating/Promoting Classes</i>	
Week 9 (37) (May 18 to 22) 18- Gr. 5 Recollection & Mass 19- Gr. 8 Recollection & Mass 20- Gr. 12 Recollection 20- Baccalaureate Mass (Whole School) 18-21 WIDA Testing 19- Lower School Sports Day / Gr. 6 & 7 School Field Trip 19- Gr. 9 - 11 - "Senior Success Forum: Inspiring the Next Generation" 19-22 Student Clearance Days 21- Middle & High School Sports Day 21- High School Field Trip 22- House Culminating Activity 20-22 Final Deliberation for Non-Graduating Classes 22- Student Leaders One Day Recollection / Turn Over Ceremony	
Week 10 (38) (May 25 to 29) 25- Kindergarten Graduation/Gr. 5 Promotion	



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26- LS Field Trip
26- Gr. 8 Graduation and Gr. 12
Graduation
27- Pre-Kindergarten & Gr. 1 - 4,
6 & 7, 9-11 Recognition
Last Day of School, Report Card
28- Distribution, & Class Party
(half day)
29- Last day for Teachers/Staff
Meeting

“Kindling the Light of Faith, Hope, and Love: The Legacy of St. Dominic de Guzmán”