

McQuaid Jesuit High School

Summer Algebra

Course Description And Syllabus

Mr. Daniel Brady
Summer 2022

This course will satisfy an Algebra 1 course, and we will be meeting at McQuaid Jesuit as outlined below .

- **Please note the SCHEDULE:**
- **This is an intensive, 4-week study program, with 1 week off (8/6 through 8/14)!**
- We begin on Monday, July 18th and conclude Friday, August 19th (Final exam that morning).
- Each day instruction begins at 830AM and concludes at 1:45PM (15-minute breaks each hour, and 45 minutes for lunch).

SUMMER ALGEBRA

Course Description

Summer Algebra begins a three- to four-year sequential study of college preparatory mathematics. Students will develop the ability to solve a variety of problems logically and critically. Some of the topics that will be addressed include but are not limited to: introduction to algebra; working with real numbers and polynomials including factoring; solving equations and word problems; applications of fractions; introduction to functions; systems of linear equations; inequalities; rational and irrational numbers; quadratic functions; and graphing. (1 High School credit).

Notes / Worksheets / Textbook

Students will need a notebook. They will also need a folder to keep various worksheets in. The folder and notebook can be separate or part of a combination folder with “side pockets”!

We will use the textbook quite often; both in class and for homework. My syllabus has M A N Y pages and problems listed. We will NOT be doing all of them! Nor will all of them be “required”! What they do represent is a roadmap and a guide to allow the student to reinforce material on his own, beyond that which we will do “in class”.

The back of the textbook we will be using ALSO has an excellent resource (beginning on page 639) of additional problems, organized by Chapter. They are listed as “Extra Practice: Skills”.

- **Textbooks will be provided**

Grading:

Three Exams: 40 % **Dates:** July 25th (Chapters 1 through 5), July 29th (through 9) & August 16th (through 12).

We will dedicate the entire morning to practice before taking these EXAMS.

QUIZZES: 30% Given in the Morning each day initially; may change to every other day.

FINAL EXAM: 20 % August 19th (Friday)

Homework / CP&C: 10 %
(Class Participation & Character)

Attendance

Attendance is vital to success in this class.

We will be meeting for 19 days, with 4 hours of instruction each day (followed by a Final Exam on day 20). Missing one day is missing over 5% of the instruction. Please ensure that you will be able to attend each day.

Academic Integrity

I expect all students to be familiar with and abide by the Academic Honesty Code. Cheating will negatively affect your grade, and action will be taken as necessary according to McQuaid Jesuit procedures. In the on-line environment, the concept of SHOWING your work becomes magnified!

Location/dates and times Logistics

5 days	July 18th – 22nd	830AM – Noon	& 12:30 - 1:30PM	20 hours
5 days	July 25th – 29th	830AM – Noon	& 12:30 – 1:30PM	20 hours
5 days:	Aug 1 st – 5th	830AM – Noon	& 12:30 – 1:30PM	20 hours
5 days:	August 15 th – 19 th *	830AM – Noon	& 12:30 – 1:30PM	18 hours

Final Exam: Friday, August 19th : 9AM – 11AM Total hours: 78 hours before Final Exam

Homework/ Classwork

- Please READ section above entitled “Notes / Worksheets / Textbook”

The Syllabus will list MANY homework assignments. These are meant to provide the student a GUIDE. That is, the student will know what material was covered and can use the textbook and the listed homework for catch-up on that material.

We will work on problems in class quite a bit. Much of the material below is for reinforcement purposes.

SUMMER ALGEBRA

Course information

Instructor: Mr. Daniel Brady

E-mail: dbrady@mcquaid.org

Text: Algebra, Structure and Method * Book 1 McDougal Littell Inc.

(This is the only required text; and it will be provided).

- I will ALSO use, and provide to the students, supplementary material throughout the course.

Additional Materials required: Pencils, a Notebook, and a VERY BASIC Calculator (no graphing calculator allowed; the correct one does NOT need sin, cos, and tan, but you may find one with these on it and that is ok).

PLEASE NOTE: The HW listed is NOT intended to tell students to ALL of these problems. An approach of doing “EFO” (every fifth one) should work, unless a student needs more practice on a certain section.

SCHEDULE OF CLASSES, TOPICS and Materials COVERED

Day	Topic	HW
July 18 (M)	Review Syllabus CH. 1 Material “Introduction to Algebra”	1)Page 17 #1 thru 26 2)Page 20 #1 thru 22 3)Page 24 #1 thru 18 4)Page 28 #1 thru 15 5)Page 33 #1 thru 14 6)Page 38 #1 thru 38 7)Page 41 & 42 Reviews
July 19 (T)	Finish Chapter 1 Begin Chapter 2 Material “REAL Numbers”	1)Page 47 #1 thru 28 2)Page 52 #1 thru 38 3)Page 56 #7 thru 43 4)Page 61 #1 thru 60 5)Page 68 #49 thru 71 6)Page 72 #1 thru 56 7)Page 77 #1 thru 16 8)Page 81 #1 thru 34 9)Page 85 #1 thru 33 Page 89 & 90 & 91 Reviews
July 20 (W)	Review 1, 2 and begin Chapter 3 Material “Solving Equations AND Problems” Introduction to “Solving Variable Equations” Review Chapters 1 through 3	1)Page 97 #1 thru 50 2)Page 104 #1 thru 44 3)Page 109 #1 thru 55 4)Page 113 #1 thru 33 5)Page 118 #1 thru 48 AND 6) #'s 1 thru 18 (Problems) 7) Page 122 #'s 1 thru 19 8) Page 127 #'s 1 thru 16 Page 135 thru 139 Reviews
July 21 (Th)	Begin Chapter 4 “Polynomials” - through 4.6	1)Page 144 #'s 24 thru 39 2)Page 148 #'s 1 thru 56 3)Page 150 #'s 5 thru 14 4)Page 153 #'s 1 thru 34 5)Page 157 #'s 5 thru 38 6)Page 159 #'s 1 thru 20 7)Page 159 #'s 27 – 34 8)Page 163 #'s 9 thru 26 9)Page 163 #'s 29 – 42 Page 164: Self-Test 2 Review
July 22 (F)	Finish Chapter 4 / Word Problems / Review Chapters 1 through 4 Chapter 5 “Factoring”	Above + 1) Page 166 #'s 1 thru 29 2) WORD Problem handouts + 1)Page 187 #'s 21 thru 46 2)Page 192 #'s 1 thru 38 3)Page 196 #'s 1 thru 50 4)Page 201 #'s 1 thru 21

		5)Page 206 #'s 1 thru 52 6)Page 210 #'s 1 thru 42 7)Page 215 #'s 1 thru 30 8)Page 218 #'s 1 thru 28 9)Page 222 #'s 1 thru 36 10)Page 225 #'s 1 thru 20 11)Page 228 #'s 1 thru 20 12)Page 232 #'s 1 thru 42 13)Page 235 #'s 1 thru 16 14) Page 240 thru 245 Reviews
July 25th (M)	Exam 1: Chapters 1 through 5 Begin Chapter 6	1)Page 248 #'s 1 thru 38 2)Page 253 #'s 1 thru 44 3)Page 256 #'s 1 thru 42 4)Page 261 #'s 1 thru 44 5)Page 267 #'s 1 thru 30 6)Page 271 #'s 1 thru 38 7)Page 276 #'s 1 thru 30 PAGE 280 – 284 Reviews
July 26th (T)	More Chapter 6 Begin Chapter 7	1)Page 289 #'s 1 thru 26 2)Page 295 #'s 1 thru 36 3)Page 299 #'s 1 thru 18 4)Page 305 #'s 1 thru 32 5)Page 312 #'s 1 thru 32 6)Page 322 ORAL #'s 1–8 7)Page 333 #'s 1 thru 28 8)Page 333 #'s 35 – 58 9)Page 339 #'s 15-22 a) PAGE 342 thru 347 Reviews
July 27th (W)	Chapter 8 “Introduction to Functions”	1)Page 351 #'s 1 thru 12 2)Page 357 #'s 1 thru 36 3)Page 363 #'s 1 thru 24 4)Page 368 #'s 1 thru 38 5)Page 372 #'s 1 thru 36 6)Page 380 #'s 1 thru 44 7)Page 386 #'s 1 thru 30 Page 405 – 409 Reviews
July 28th (Th)	Chapter 9	1) Page 415 #'s 1 thru 18 2)Page 419 #'s 1 thru 24 3)Page 424 #'s 1 thru 10 4)Page 427 #'s 1 thru 12 5)Page 428 #'s 1 thru 8 6)Page 432 #'s 1 thru 9 7)Page 434 #'s 1 thru 28 8)Page 440 #'s 1 thru 16 PAGE 451- 455 Reviews

July 29th (F)	Exam 2 Chapters 1 through 9 (Emphasis on 6 through 9) Begin CHAPTER 10	Above and below
8/1 (M)	Finish Chapter 10 “Inequalities” & Absolute Value	1)Page 459 #'s 1 thru 38 2)Page 466 #'s 1 thru 10 3)Page 469: READ Examples 1,2, and 3: 4)Page 473 #'s 1 thru 20 5)Page 480 #'s 5 thru 36 6)Page 485 #'s 13 – 39 7)Page 496 #'s 1 thru 18 PAGE 501 – 503 Reviews
8/2 (T)	Begin Chapter 11 “Rational & Irrational Numbers” Through 11.4	1)Page 519 #'s 1 thru 20 2)Page 522 #'s 1 thru 38 3)Page 526 #'s 1 thru 50 4)Page 532 #'s 1 thru 20 5)Page 536 #'s 1 thru 12 6)Page 538 #'s 1 thru 46 7)Page 541 #'s 1 thru 32 8)Page 545 #'s 1 thru 22 9)page 548 #'s 1 thru 44
8/3 (W)	More Chapter 11	See above
8/4 (TH)	More Chapter 11	See above
8/5 (F)	Begin Chapter 12 “Quadratic Equations”	Below
8/15 (M)	Finish Chapter 12 Prep for Exam 3	1)Page 563 #'s 1 thru 4 2)Page 566 #'s 1 thru 27 3)Page 569 #'s 1 thru 28 4)Page 574 #'s 1 thru 18 5)Page 580 #'s 1 thru 14
8/16 (T)	<u>Exam 3</u> & Review for FINAL	See above
8/17 (W)	Review for FINAL	Various / ALL
8/18 (Th)	Review for FINAL	Various / ALL
8/19 (F)	FINAL EXAM	Ends at NOON

Regarding: “Home/Class WORK Assignments” in above Syllabus
From: Mr. Brady

- **Make sure to read through entire syllabus!**
- **Homework is designed to reinforce class material, and prepare you for the exams:**
 - 1) **The above problem sets are MORE than we will DO in class, and MORE than you will need to do “at home”. I would pick a few from each section and make sure you understand the concept, then move on to another problem set.**
 - 2) **That is, we will do a large portion of HW in class and you should then spend another 1 to 2 hours each night doing more.**