2025 – 26 ATYP Geometry Syllabus

Tuesday/Thursday: 1:20 – 3:50 pm

Classroom: **Sangren Hall 1310**

Instructor

Mrs. Ashley Koch ("Koch"is pronounced like "coach")

Office hours: by appointment only. Email me to set up a time; a webex link will be sent to you.

E-mail: ashley.koch@wmich.edu

Email is the best and preferred method of contacting me. Please do not hesitate to reach out with any questions or concerns. I will reply within 24 hours on weekdays. I will reply to weekend communication by Monday, if not sooner.

Website

Gowmu.wmich.edu

- Used to access both **eLearning** for our course, **WMU email, Help Session Teams,** etc..
- **You should only use your WMU email to communicate with me when emailing.** You should check your WMU email frequently!
- You will need to be able to access Elearning for certain things throughout the year (including the final exam), so be sure you can log in!

Supplies for Class

- **Textbook** (*provided*): Geometry, Prentice Hall Mathematics-High School Math Series, Laurie Bass, Randall Charles, Basia Hall, Art Johnson & Dan Kennedy, 2007
- **Calculator**: The TI-84 or TI-83 graphing calculator will be used as the primary computing device for this course. Students should become adept at using their graphing calculators not only to evaluate algebraic expressions, but also to investigate the behavior of functions and their graphs and to carry out elementary statistical procedures. Nevertheless, students also have to learn the basic paper-and-pencil rules and techniques of algebra and geometry. It is expected that students will be equally competent using both methods. For homework (not exams) the desmos graphing calculator is a good resource as well!
- **Notebook**: for in class notes and exercises.
- **Loose Leaf Paper**: if time permits to begin homework assignment in class.
- **Graph Paper**: 4 squares per inch, for accurate graphs. **All homework graphs need to be completed on graph paper.**
- **Folder or Binder:** to stay organized and hold all relevant course materials.
- **Pencil(s) and eraser**: Math should be completed in pencil, **not pen or marker**. Mistakes happen and should be easy to correct.
- **Ruler:** to be used for drawing straight lines and geometric constructions.
- **Compass:** used to draw/construct circles, semicircles, and arcs.
- **Protractor:** used to find the measure of an angle.
- **Highlighter:** can be useful in identifying important information or drawing attention to specific parts of notes/homework.
- **Colored Pencils:** (optional) same as for highlighter, but can also be useful when graphing multiple graphs on the same coordinate plane or constructing multiple shapes on the same paper.
- **Stapler** (optional) to secure homework assignments for submission.
- **Three Hole Punch** (optional) to ensure pages are not lost for binder storage.

Highlighted items in the list above will be available in class for student use and can be made available for students to borrow during the week.

Grade and Grade Calculation

Grading Scale		
Letter	**Lower Threshold**	**Upper Threshold**
A	90%	99%+
BA (A-)	80%	89%
B	70%	79%
C	60%	69%
NC	0%	59%

Grade Distribution				
In-Class	**Out of Class**	**Category**	**Frequency**	**Weight**
	X	Homework	weekly	40%
X	**X**	Quizzes	weekly	15%
X		Participation	weekly	5%
X		Exams	3 + final exam	40%

To obtain credit for the course, students are expected to perform satisfactorily in all grade categories. Overall grade percent averages must meet the minimum requirements. Final evaluations will assess the student's overall comprehension of the content.

Homework grades falling below 60% three times indicates that the program might not be suited to the student. A conference between the parent(s)/guardian(s) and the teacher will be arranged.

Homework [40%]

- Mastery comes from practice, i.e., doing homework problems – on a daily or regular basis. Concepts and skills are honed through study and completing homework assignments on time. Before attempting homework problems from the new section, read the section for understanding and review your notes from class. **Expect to spend an hour to two per day on your homework.**
- **Assignment Organization: (See below on page 7 for pictorial example and video on elearning)**
  - **It is imperative that your homework is easy to follow and neatly organized. If the problems are disorganized or hard to find, your homework will be returned to you without grading.**
  - Begin each homework by writing your name in the upper **right** hand corner margin. On each subsequent page, be sure to include your name with the page number in the top right hand margin.
  - In the upper **left** corner margin you may write the homework number followed by sections covered below the assignment number. - i.e. "Homework 1" or "HW 1."
  - Before answering any questions from a section, be sure to **label the section** itself. For Example, "Section 3.4" and then you may begin to complete the assigned problems on the lines below. **Clearly label each section.**

- Start each problem by writing the problem number on the ***left*** of the margin. **Clearly label each problem number.** Do not try to fill a page with problems written all over. Show steps/methods on separate lines. *If an answer comes from your calculator, clearly state the procedure you used and/or draw a sketch of your graphing screen.*
- Complete problems sequentially by section. Problems out of order may not receive credit.
- You *may* copy part of the problem, **if desired**, for shorter problems. You do not need to copy the entire question, especially for story-like problems!
- Be sure to show **all steps** in completing problems, and **box in or circle your answer**. Write legibly. If your work cannot be read, it cannot be graded nor can feedback be provided. **Work is expected to be shown.**
- **Leave at least 2-3 lines between problems.** This helps to quickly see where one problem stops and the next begins. Leaving space also provides room for feedback. Don't try to cram everything together – that causes homework to become hard to follow.

- **Show all of your work** and give detailed, complete answers on all of your assignments and exams to earn full credit. Answers with little or no work to support them usually receive half credit, at best, sometimes less. Showing your work allows the grader to give partial credit if your answer is incorrect, informs about misconceptions you may have, and is an important skill for upcoming coursework that utilizes math skills, logic, and analytical reasoning. In your career, you will almost always be expected to justify your work. Start now where we can assist with feedback.

- **Graphs are to be drawn on graph paper only** (4 squares per inch recommended). Any required graphs not completed on graph paper will not be graded and credit will be lost. **Use a ruler for straight lines**. When using graph paper, clearly label which problem the graph accompanies. Graphs may be embedded within the assignment for each problem necessary, or the set of graphs on graph paper used to draw accompanying graphs for problems may be stapled at the end of the homework. In the latter, be sure to label each graph well so it is clear which problem it should accompany.
- Homework can also be completed entirely on graph paper, but be sure to follow the organizational expectations as noted above!

- The completed homework **must** be stapled on the top **left-hand corner.** One staple is sufficient. You need not staple it like a book binding. **Please do not staple your homework like a book binding.**

- Please remove any perforated edges carefully before submitting. Your submitted homework should be neat and tidy. You can always ask if your homework meets the requirements before submitting!

- **Due Dates:** Homework will be turned in each week of class. Specific, individual due dates for assignments are outlined on the final page of this syllabus and provided in a separate document by itself as well. Homework is expected to be submitted by 1:20 pm (the start of class) on the day the assignment is due.

- **Late homework** is any homework that is not turned in during the class it is due. Late homework will be accepted the following week after it is due ONLY. One should not make a habit of completing homework late. A conference between the parent(s)/guardian(s) and the teacher will be arranged for students who are turning in homework late more than once. Emailed copies of the homework are considered late homework, even if they may have been completed before class. **Late homework submissions are exempt from the opportunity for correction.**

- **Absences:** Please be reminded that being absent from ATYP is the equivalent of missing an entire week to two weeks of your home school content. Experience has shown that skipping a week proves to have a negative effect on student overall class performance and final grade.
  - If you must be absent and cannot submit your homework in person, you may have another student deliver your homework to class the day it is due.

- If that is not a possibility, you will need to send a copy of the homework by email prior to the beginning of class (1:20 pm). **Please do not send individual photos of each page.** You should scan your homework and submit it as one file. If you do not have access to a scanner, you can use your phone to "scan" the document. Both the iPhone app store (and Notes app) as well as the Google Play store have a number of suitable apps for scanning documents. Hold the phone level with the paper over each page and when it gives you an image for what it has scanned be sure the image is **clear** and that you **move any edges to match the actual paper**. When you have scanned all of the pages, "save" the file. Rename the document to the homework number and your last name. You can directly email it from the iPhone notes app as a PDF to my email, provided you have the outlook app. Videos are available on elearning for further assistance.

- **Grading:** Homework will be graded each week. This may be a sampling of the problems or all of them. The solutions will be returned in a timely fashion to allow the student feedback on the problems. To assist in feedback to the student, the assignments have an overlap of sections from one week to the next.

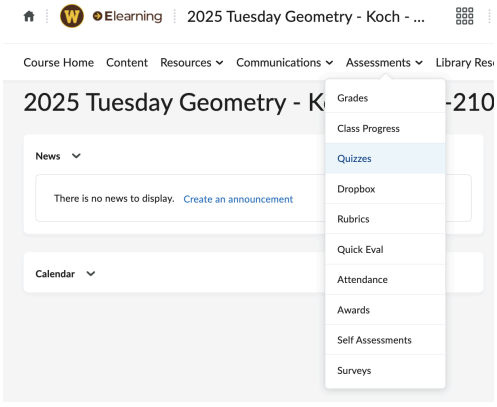
- **Corrections:** Students are encouraged to take risks, to make mistakes, and to learn from them. To become fluent and competent in mathematics, students must be aware of their shortcomings and their wrong interpretations of concepts. Doing corrections is a very important habit in the growth of a student. You may turn in corrections and earn back points missed. **Corrections must be done on an entirely different sheet of paper and the original homework included.** Each corrected problem should be identified along by the section number and problem number. **Corrections may only be submitted the week after the homework is returned to the student.** Corrections are never required, but always encouraged!

- **Other Important Considerations:**
  - One of the most important aspects of this class is the need for clear, logical and concise communication of mathematical concepts. A correct answer to a problem is not the end by itself – I seek for the flow of reasoning in arriving at the answer. **Students should be asking: What properties allow me to do that? What operations do I use? Is the answer reasonable?**
  - Every problem assigned should be completed. Do not give up on a difficult problem. Seek help, when needed.
  - Points will be deducted for each incompleted problem from the assigned set.
  - Again, work is expected to be shown for *most* problems assigned. If the problem is short or simple enough to do in one step in your head or calculator that would be the exception not to show work.

Quizzes [15%]

In addition to weekly homework, students will be expected to complete a weekly quiz in class or on Elearning as instructed. This quiz is *typically* scheduled the third week following the completion of a chapter/topic in class as well after having completed two weeks of homework on the same chapter/topics, although there may be some exceptions. Students will not be able to correct their quiz, however, one retake of the quiz may also be offered on Elearning.

Quizzes can be located on Elearning under the "Assessment" drop down arrow and selecting "Quizzes." As seen below.



In-Class Expectations/Participation [5%]

This year, our class will be undergoing a number of changes to the "typical" classroom learning environment. We will be adopting a "Building Thinking Classroom" approach. **Please read the BTC welcome letter document linked here.**

Students will be expected to collaborate with their group members during assigned thinking tasks each class. Following the thinking task, the class will be led through a consolidation of main ideas and given the opportunity to record notes to their future forgetful selves. Time permitting, students will be given opportunities to check their understanding, practice current topics, or review previous concepts.

Students found not following explicit directions or expectations will observe that in their participation grade. Actions that will cause students to have deductions from their participation include (but are not limited to): refusing to collaborate, refusing to discuss ideas when asked by the instructor, share the marker, wandering from their group, frequent off topic conversations, switching assigned random grouping card, disruptions during consolidation of main ideas, not taking notes, etc. Any deduction in participation is at the discretion of the instructor.

Exams [40%]

Exam 1, Exam 2, and Exam 3 are written by the instructor. The Final Exam is the Michigan Standardized Exam covering Geometry content standards. Exam 1 will focus content on chapters 1 – 3. Exam 2 will focus content on chapters 4 – 6. Exam 3 will focus content on chapters 7 – 9. Since the final exam is cumulative and covers all content, Exams 2 and 3 may have content from the prior chapters as well. There is not a formal exam covering chapters 10 – 12 aside from the final exam.

Exams will be graded on whether or not the student demonstrated understanding of each standard, partial credit will not be awarded for exams. Rather, we will be using a rubric that contains information based on each individual student's performance regarding basic understanding, intermediate understanding, or advanced understanding (these may be referred to as mild, medium, and spicy, or some other variation to indicate the different question leveling). Each exam may have a different number of overall points possible given the standards and types of questions that can be asked based on the content.

Data analysis will be performed for each student. Depending on the number of standards addressed, the students will receive three points for demonstrating basic understanding, four points for demonstrating intermediate understanding, and five points for demonstrating advanced understanding. Other data, such as observational data or conversational data collected during class will assist the instructor in assessing the student's understanding of content.

- **Exam 1** – Content concentration on Chapters 1 – 3.
- **Exam 2** – Content concentration on Chapters 4 – 6.
- **Exam 3** – Content concentration on Chapters 7 – 9.
- **Final Exam** – state standardized and timed assessment that covers the entirety of Geometry content standards.

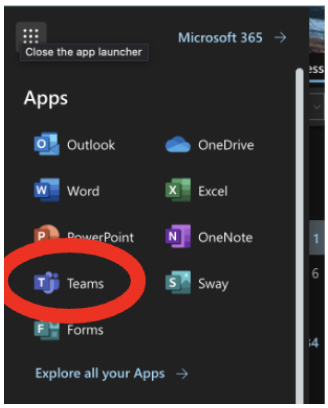
Question Level	Points Awarded
Basic (Mild)	3
Intermediate (Medium)	4
Advanced (Spicy)	5

Tips for Success

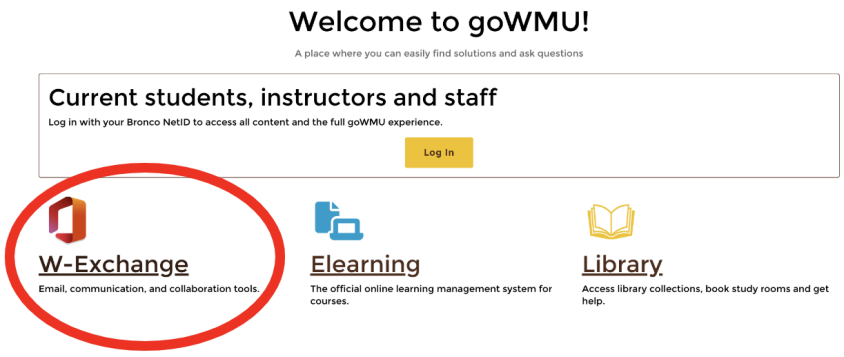
- Begin homework as soon as possible after our weekly class sessions. Don't wait until the night before class to begin your homework!
- Pace yourself throughout the week with homework sessions each day or every other day.
- Take quality in-class notes, including documenting examples to reference later for your future forgetful self.
- Do some careful planning before you document proofs or diagrams.
- Read the introduction and examples provided in the textbook regarding understanding new sections.
- Work through the textbook examples step-by-step, thinking about why each step was made.
- Work an odd numbered problem adjacent to the even numbered problem and check your answer with the one provided in the back of the book.
- Write out every step in the solution process and check your work as you go.
- **Attend help sessions**, phone or email a classmate, or Mrs. Koch for additional homework help. Don't wait until the night before class to seek help!
- When seeking help, be prepared to explain your question and what you've tried so far.
- Form a study group with your peers.

Help Sessions

Students are **highly encouraged to** attend help sessions. Help sessions can be accessed on Microsoft Teams. Teams can be located a number of ways. An extremely easy way to access Teams is through the waffle in the upper left-hand corner of your WMU Outlook email or through goWMU (see below). You will locate the Team titled **"Math Help Session 2025-26."**



or



For students who wish to, attendance can be recorded and students can earn dropped assignments or quizzes. Students may count up to one help session per week toward the following totals:

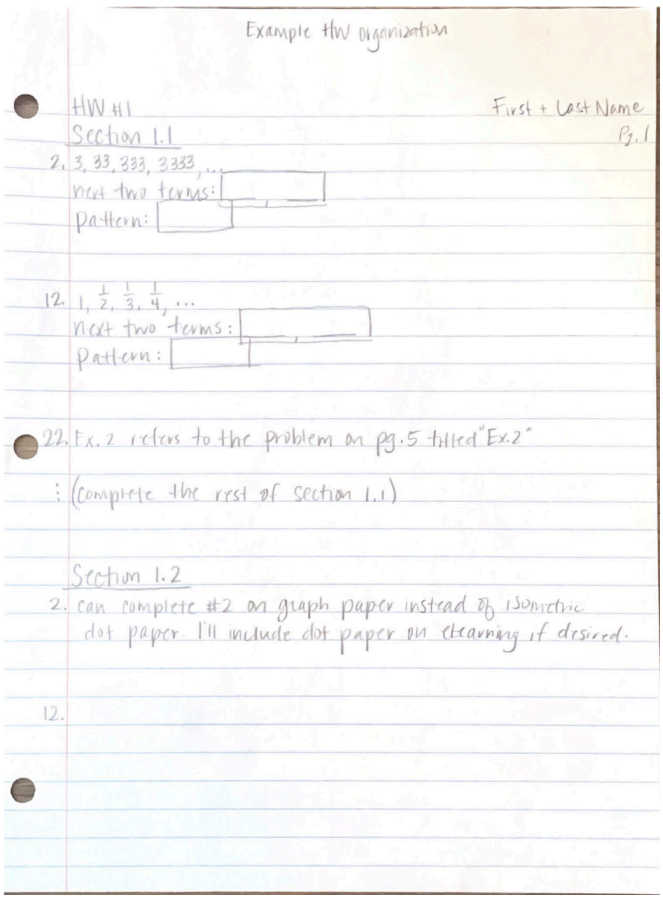
- 8 help sessions attended = 1 (lowest) homework dropped
- 15 help sessions attended = 1 (lowest) homework dropped AND 1 (lowest) quiz score dropped

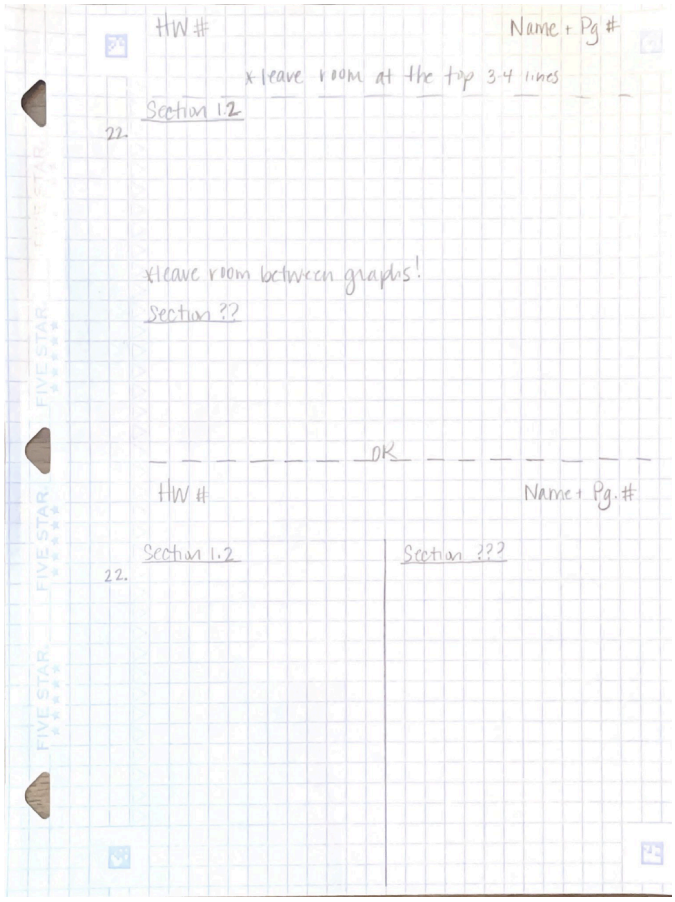
Students **must** complete the Help Session Attendance Check-in within an hour of attending each help session. I will cross reference these submissions with the data provided by Teams and the tutors. *Students are expected to spend at least 30 minutes in attendance, and ask at least one question while attending the help session toward the dropped assignments.*

Weekly Help Session Dates and Times			
Sunday	**Monday**	**Wednesday**	**by Email**
4 – 6 pm	7 – 8 pm	7 – 8 pm	Anytime; expect response (usually) within 24 hours

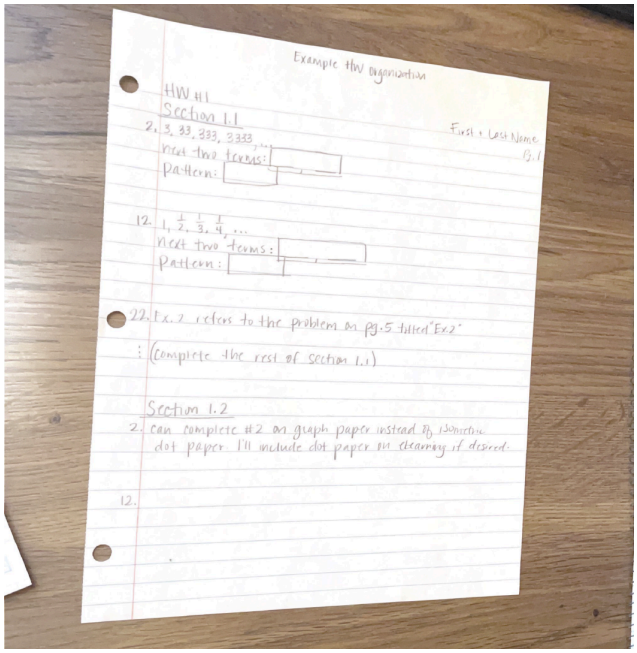
HOMEWORK EXAMPLES

Good: It is completed in pencil, easy to identify which section and problem, as well as see the answer to problems (boxes) and where one problem stops and the next problem starts.





Bad: When using the scan feature on your phone it is important to adjust the edges of the paper so your document can be easy to read. Other items to avoid: too much writing cramped onto the page, hard to follow which section/problem.



Course Topic Outline (Subject to change, as needed)

Chapter	Title	Topics Included
1	Geometric Tools	Patterns, Inductive Reasoning, Drawings, Nets, Models, Points, Lines, Planes, Segments, Rays, Parallel Lines and Planes, Measuring segments and angles, Constructions, the Coordinate Plane, Perimeter, Circumference, Area.
2	Reasoning and Proofs	Using logic, definitions, theorems, postulates, etc. to prove a statement.
3	Parallel and Perpendicular Lines	Properties, proving lines are parallel or perpendicular.
4	Congruent Triangles	Defining congruence, and using triangle side and angle relationships.
5	Relationships within Triangles	Midsegments, Bisectors, Concurrent Lines, Medians, and Altitudes.
6	Quadrilaterals	Classifying, Properties, Parallelograms, Trapezoids, Kites, Figures in the Coordinate Plane, Proofs.
7	Similarity	Ratios, Proportions, Proving Similarity.
8	Right Triangles and Trigonometry	Pythagorean Theorem and its Converse, Special Right Triangles, Sine, Cosine, and Tangent Ratios, Angles of Elevation and Depression, Vectors.
9	Transformations	Translations, Reflections, Rotations, Symmetry, Dilations, Compositions of Transformations, Tessellations.
10	Area	Parallelograms, Triangles, Trapezoids, Rhombuses, Kites, Regular Polygons, Perimeter and Area of Similar Figures, Trigonometry and Area, Circles and Arcs, Areas of Circles and Sectors.
11	Surface Area and Volume	Cross Sections, Prisms and Cylinders, Pyramids and Cones, Spheres, Similar Solids.
12	Circles	Tangent Lines, Chords and Arcs, Inscribed Angles, Angle Measures and Segment Lengths, Circles in the Coordinate Plane.

Homework Schedule at a Glance – 2025

In addition to assigned problems to be completed, homework also includes reading the new sections to be taught in the coming week.

This homework schedule is tentative and subject to change given notice.

Week/Date	New Sections Covered	Homework Sections	Problems	Due (T/R)
0. Before Week 1	N/A	Summer Homework BTS Surveys – Student and Parent!	Problem List Student Survey/Parent	Aug 26/28
1. Aug 26/28	Routines, Syllabus, **Chapter 1** (1.1 – 1.4)	Schedule of life; Chapter 1 and 1.1 – 1.4 objectives**,** vocabulary; **ABC, Test Prep, Mixed Review:** 1.1 – 1.4; **Pg. 30** Activity (Evens)	**8's**: 8, 18, 28, …	Sept 2/4
2. Sept 2/4	**Chapter 1** (1.5 – 1.9) Syllabus Quiz	Chapter 1 and 1.5 – 1.9 objectives, vocabulary; **P.43** Lab; **P.70** TTS; **ABC, Test Prep, Mixed Review:** 1.1 – 1.9; **Chapter 1 Review:** 1 – 9	**2's**: 2, 12, 22, …	Sept 9/11
3. Sept 9/11	**Chapter 2** (2.1 – 2.5) Expectations Quiz	Chapter 2 and 2.1 – 2.5 objectives, vocab; **P.102** Lab; **P.116** TTS; **ABC, Test Prep:** 1.1 – 2.5; **Chapter 2 Review:** 1 – 10	**4's**: 4, 14, 24, …	Sept 16/18
4. Sept 16/18	**Chapter 3** (3.1 – 3.8) Chapter 1 Quiz	Chapter 3 and 3.1 – 3.8 objectives, vocab; **P.165**; **P.172**; **P.188** TTS; **ABC, Test Prep:** 2.1 – 3.8; **Chapter 3 Review:** 1 – 10	**6's**: 6, 16, 26, …	Sept 23/25
5. Sept 23/25	**Chapter 4** (4.1 – 4.7) Chapter 2 Quiz	Chapter 4 and 4.1 – 4.7 objectives, vocab; **P.227**; **P.234**; **P.248** TTS; **ABC, Test Prep:** 3.1 – 4.7; **Chapter 4 Review:** 1 – 9	**8's**: 8, 18, 28, …	Sept 30/Oct 2
6. Sept 30/Oct 2	**Chapter 5** (5.1 – 5.5) Chapter 3 Quiz	Check-in Survey 1 (eLearning) **Chapter Review**, **Chapter Test, Standardized Test Prep:** Chapters 1 – 3	**Evens**, As Specified*	Oct 7/19
7. Oct 7/9	**Exam 1** Chapters 1 – 3	Chapter 5 and 5.1 – 5.5 objectives, vocab; **P.271**; **P.288**; **P.296** TTS; **ABC, Test Prep:** 4.1 – 5.5; **Chapter 5 Review:** 1 – 10	**2's**: 2, 12, 22, …	Oct 14/16
8. Oct 14/16	**Chapter 6** (6.1 – 6.7) Chapter 4 Quiz	Chapter 6 and 6.1 – 6.7 objectives, vocab; **P.355** Review; **P.356** TTS; **ABC, Test Prep:** 5.1 – 6.7; **Chapter 6 Review:** 1 – 10	**4's**: 4, 14, 24, …	Oct 21/23
9. Oct 21/23	**Chapter 7** (7.1 – 7.5) Chapter 5 Quiz	Chapter 7 and 7.1 – 7.5 objectives, vocab; **P.372**, **P.390** Rev; **P.406** TTS; **ABC, Test Prep:** 6.1 – 7.5; **Chapter 7 Review:** 1 – 7	**6's**: 6, 16, 26, …	Oct 28/30
10. Oct 28/30	**Chapter 8** (8.1 – 8.6) Chapter 6 Quiz	Check-in Survey 2 (eLearning) **Chapter Test, Standardized Test Prep:** Chapters 4 – 6	**Evens**, As Specified*	Nov 4/6

11. Nov 4/6	**Exam 2** Chapters 4 – 6	Chapter 8 and 8.1 – 8.6 objectives, vocab; **P.431** Lab; **P.460** TTS; **ABC, Test Prep:** 7.1 – 8.6; **Chapter 8 Review:** 1 – 7	**8's**: 8, 18, 28, …	Nov 11/13
12. Nov 11/13	**Chapter 9** (9.1 – 9.7) Chapter 7 Quiz	Chapter 9 and 9.1 – 9.7 objectives, vocab; **P.504**; **P.514**; **P.522** TTS; **ABC, Test Prep:** 8.1 – 9.7; **Chapter 9 Review:** 1 – 7	**2's**: 2, 12, 22, …	Nov 18/20
13. Nov 18/20	**Chapter 10** (10.1 – 10.7) Chapter 8 Quiz	Check-in Survey 3 (eLearning) **Chapter Review**, **Chapter Test, Standardized Test Prep:** Chapters 7 – 9	**Evens**, As Specified*	Dec 2/4
Thanksgiving Recess				
14. Dec 2/4	**Exam 3** Chapters 7 – 9	Chapter 10 and 10.1 – 10.7 objectives, vocab; **P.574** Rev; **P.588** TTS; **ABC, Test Prep:** 9.1 – 10.7; **Chapter 10 Review:** 1 – 5	**4's**: 4, 14, 24, …	Dec 9/11
15. Dec 9/11	**Chapter 11** (11.1 – 11.7) Chapter 9 Quiz	Chapter 11 and 11.1 – 11.7 objectives, vocab; **P.607** Rev; **P.652** TTS; **ABC, Test Prep:** 10.1 – 11.7; **Chapter 11 Review:** 1 – 5	**6's**: 6, 16, 26, …	Dec 16/18
16. Dec 16/18	**Chapter 12** (12.1 – 12.5) Chapter 10 Quiz	Chapter 11 Quiz, Chapter 12 Quiz (eLearning) Chapter 12 and 12.1 – 12.5 objectives, vocab; **P.677**; **P.694**; **P.706** TTS; **ABC, Test Prep:** 11.1 – 12.5; **Chapter 12 Review:** 1 – 4	**8's**: 8, 18, 28, …	Jan 6/8
Winter Recess				
17. Jan 6/8	**Precalculus Chapter 1** (Alg 2 students to Alg 1 Review)	Final Exam Part 0 (Take home final) End of Semester Survey (google form)		Jan 13/15
18. Jan 13/15	**Final Exam** **Parts 1+2**	Precalculus HW 1 (See PC Syllabus or PC HW List)		Jan 20/22

* Answers provided on eLearning; Assignment graded on completeness and work shown.

Additional Review Practice for Final Exam (Optional):		
Chapters 10 – 12 Test and Standardized Test Prep	**Chapters 1 – 12 Chapter Reviews**	**Chapters 1 – 12 Extra Practice**
CH. 10 (p. 592) CH. 11 (p. 656) CH. 12 (p. 710)	CH. 1 (71) CH. 2 (117) CH. 3 (189) CH. 4 (249) CH. 5 (297) CH.6 (357) CH.7 (407) CH. 8 (461) CH. 9 (523) CH.10 (589) CH.11 (653) CH. 12 (707)	CH. 1 (716) CH. 2 (718) CH. 3 (720) CH. 4 (722) CH. 5 (724) CH.6 (726) CH.7 (728) CH. 8 (730) CH. 9 (732) CH.10 (734) CH.11 (736) CH. 12 (738)
answers checked upon request	all answers provided in back of textbook	Odd answers provided in textbook; evens checked upon request.