

2nd Semester Final Topics

Instructions: There are 40 multiple choice questions for this final, with 8 questions for each unit that we have covered in the 2nd semester. Below are the list of topics that are covered for the final, and the **underlined** topic for each unit means that topic consists more questions than the other topics. Please study accordingly!

Unit 6: Exponential and Logarithmic Functions

- Evaluating logarithmic expressions (pg. 311 example 3)
- Finding the inverse of exponential and logarithmic functions (pg. 312 example 4)
- Transformations of exponential and logarithmic functions (pg. 321 examples 5, 6)
- Using the properties of logarithms to evaluate (pg. 328 example 1)
- Condensing and expanding logarithms (pg. 329 examples 2, 3)
- Solving logarithmic and exponential equations (pg. 334 examples 1, 3, 4)

Unit 7: Rational Functions

- Simplifying rational expressions (pg. 376 example 1)
- Multiplying and dividing rational expressions (pg. 377 examples 2, 3, 4, 5, 6)
- Adding and subtracting rational expressions (pg. 385 example 3, 4)
- Solving rational equations (pg. 392 examples 1, 3, 4)
- Graphing rational functions (with domain and range) (pg. 367 examples 2, 3)

Unit 8: Sequences and Series

- Writing a series in summation notation (pg. 412 example 4)
- Finding the sum of arithmetic and geometric series (pg. 421 example 5, pg. 429 example 5)
- Finding the sum of an infinite geometric series (pg. 437 example 2)
- Creating rules for sequences given specific terms (pg. 420 example 4, pg. 428 example 4)
- Writing rules for arithmetic and geometric sequences (pg. 419 example 2, pg. 427 example 2)
- Writing recursive rules for arithmetic and geometric sequences (pg. 443 example 2)
- Word Problems (pg. 412 example 6)

Unit 9: Trigonometry

- Finding exact values of trigonometric expressions (pg. 479 example 2, pg. 481 example 4)
- Solving trigonometric equations (pg. 522 example 4)
- Finding trigonometric values given other trigonometric values (pg. 463 example 2)
- Graphing trigonometric functions (pg. 489 examples 3, 4; pg. 499 examples 1, 2, 3, 4)
- Understanding negative and coterminal angles (pg. 471 example 2)
- Understanding degrees and radians (pg. 472 example 3)
- Using the sum and difference formulas (pg. 521 example 3)

Unit 10: Data Analysis and Probability

- Geometric/Area probability (pg. 540 example 4)
- Combinations (pg. 573 example 5)
- Permutations (pg. 571 example 3)
- Probability of overlapping or disjoint events (pg. 564 examples 1, 2, 3)
- Probability of independent or dependent events (pg. 547 examples 3, 4)
- Normal Distribution to find probability (pg. 597 example 2)
- Finding the z-score and using a Standard Normal Table (pg. 598 example 3)