

Topics for the Final Exam

- Properties of exponents and logarithms.
- Exponential and logarithmic equations.
- Exponential growth and decay.
- The elementary trigonometric functions (sin, cos, tan, sec, csc, cot).
- Trigonometric functions of angles and real numbers.
- Transformations of the graphs of sine and cosine.
- Simple harmonic motion.
- Inverse trigonometric functions.
- Solving triangles.
- The Law of Sines.
- The Law of Cosines.
- Basic trigonometric identities.
- Simplifying trigonometric expressions and proving trigonometric identities.
- Solving trigonometric equations.
- Conic sections, including parabolas, ellipses, and hyperbolas.
- Solving systems of linear equations.
- Matrix algebra, including multiplication and inverses.

These topics are covered in Chapters 4, 5, 6, 7, 10, and 11 of the recommended textbook (by Stewart, Redlin, and Watson).