

Math 110 (Section 002) Learning Objectives

Students should be able to do the following things by the end of each respective unit. Additions may be made as the term progresses.

Trigonometry

1. Argue for the “naturalness” of measuring angles in radians as opposed to degrees.
2. Argue for the usefulness of trigonometric functions.
3. Define the functions $\sin x$ and $\cos x$ in terms of the unit circle as well as right triangles.
4. Sketch the graphs of $\sin x$ and $\cos x$ as well as transformations of $\sin x$ and $\cos x$.
5. Explain what the derivatives of $\sin x$ and $\cos x$ are and justify them without proof.
6. Apply derivative rules to functions that are a composition of trig functions and polynomials.