

NC Math 3 Course Overview H – Trigonometry

March 22, 2019 – April 25, 2019

This section of Math 3 will cover the following standards...

NC.M3.F-IF.1 Extend the concept of a function by recognizing that trigonometric ratios are functions of angle measure.

NC.M3.F-IF.4 Interpret key features of graphs, table, and verbal descriptions in context to describe functions that arise in applications relating two quantities to include periodicity and discontinuities.

NC.M3.F-IF.7 Analyze piecewise, absolute value, polynomials, exponential, rational, and trigonometric functions (sine and cosine) using different representations to show key features of the graph, by hand in simple cases and using technology for more complicated cases, including: domain and range; intercepts; intervals where the function is increasing, decreasing, positive, or negative; rate change; relative maximums and minimums; symmetries; end behavior; period; and discontinuities.

NC.M3.F-IF.9 Compare key features of two functions using different representations by comparing properties of two different functions, each with a different representation (symbolically, graphically, numerically in tables, or by verbal descriptions).

NC.M3.F-BF.3 Extend an understanding of the effect on the graphical and tabular representations of a function when replacing $f(x)$ with $k \cdot f(x)$, $f(x)+k$, $f(x+k)$ to include $f(k \cdot x)$ for specific values of k (both positive and negative).

NC.M3.F-TF.1 Understand radian measure of an angle as:

- The ratio of the length of an arc on a circle subtended by the angle to its radius.
- A dimensionless measure of length defined by the quotient of arc length and radius that is a real number.
- The domain for trigonometric functions.

NC.M3.F-TF.2 Build an understanding of trigonometric functions by using tables, graphs and technology to represent the cosine and sine functions.

- a. Interpret the sine function as the relationship between the radian measure of an angle formed by the horizontal axis and a terminal ray on the unit circle and its y coordinate.
- b. Interpret the cosine function as the relationship between the radian measure of an angle formed by the horizontal axis and a terminal ray on the unit circle and its x coordinate.

NC.M3.F-TF.5 Use technology to investigate the parameters, a , b , and h of a sine function, $f(x) = a \cdot \sin(b \cdot x) + h$, to represent periodic phenomena and interpret key features in terms of a context.

Tentative Date for Test H: Thursday, April 25, 2019

Date	I can...	A#	Assignment	Follow-up?
3/22/19				
4/1/19				
4/2/19				

Date	I can...	A#	Assignment	Follow-up?
4/3/19				
4/4/19				
4/5/19				
4/8/19				
4/9/19				
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4/25/19			UNIT H TEST	

