

# **New Mathematics Pathways: Geometry/Trigonometry**



**Board of Education Presentation  
June 21, 2016**

# Recall: Current Pathway Concerns



- **Common Core Alignment:  
Algebra 1 vs. 8th Grade Mathematics**
- **Pursuing Geometry after the Algebra 1 Course  
interrupts momentum in algebraic work**
- **With the current trajectory, we find students struggle  
upon entering Algebra 2/Trigonometry**
  - **Valuable time is lost due to the need to review**

# Recall: What Did We Propose?



## **Algebra 1 & 2 will combine into a 2 year Algebra sequence**

- **Common Core Algebra 1 & Non-Trigonometric topics from Algebra 2**
- **Provides more in-depth and cohesive study**
- **Fosters a deeper algebraic understanding**
- **Common Core Algebra 1 Regents at the end of Algebra 2**
- **Benefits students in their science courses**

# Recall: What Did We Propose?



## **Geometry & Trigonometry will merge into one course**

- **Which will include a study of proofs, integrated with algebraic exercises that demonstrate key concepts**
- **The trigonometry portion of the course will come from the Common Core Geometry & Algebra 2 standards and prepare students with the skills necessary for PreCalculus**
- **Trigonometry is the study of triangles (logical grouping with Geometry)**

# Recall: What Did We Propose?



**By the end of three years:**

- **Students will still have completed the entire Common Core Algebra 1, Geometry, and Algebra 2 standards /sequence**
- **The courses are simply being reorganized to maximize learning and promote mastery**

# Implementation of the New Mathematics Pathways



- **2015-2016 - Algebra 1**
  - **Current 8th grade students were enrolled in the new Algebra 1 course**
- **2016-2017 - Algebra 2**
  - **Incoming 9th grade students who took Algebra 1 will be enrolled in Algebra 2**
  - **These students will take the CC Algebra 1 Regents in June 2017**
- **2017-2018 - Geometry/Trigonometry**
  - **Students who completed Algebra 2 will be enrolled in Geometry/Trigonometry**

# New Curriculum: Geometry/Trigonometry



## *Geometry*

**Unit 1: Miscellaneous Geometry**

**Unit 2: Triangles**

**Unit 3: Polygons/Quadrilaterals**

**Unit 4: Coordinate Geometry**

**Unit 5: Triangle Congruence**

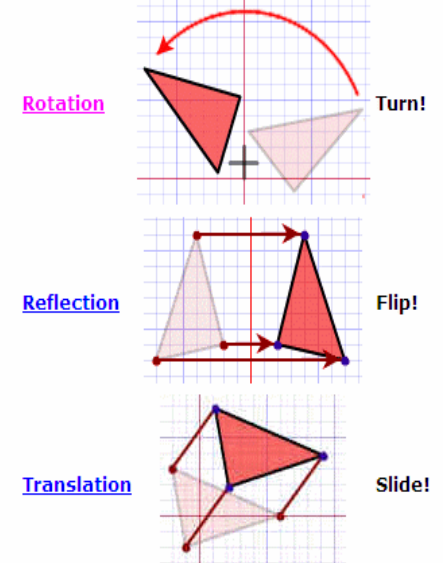
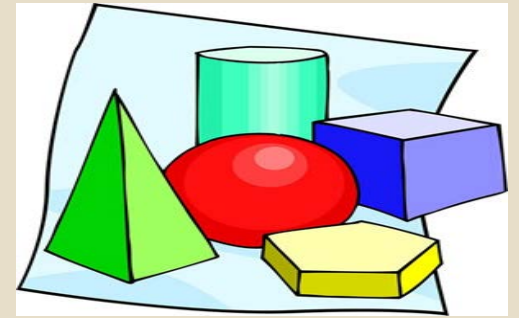
**Unit 6: Transformations**

**Unit 7: Similarity**

**Unit 8: Circles**

**Unit 9: Locus**

**Unit 10: 3D Solids**



# New Curriculum: Geometry/Trigonometry



## *Trigonometry*

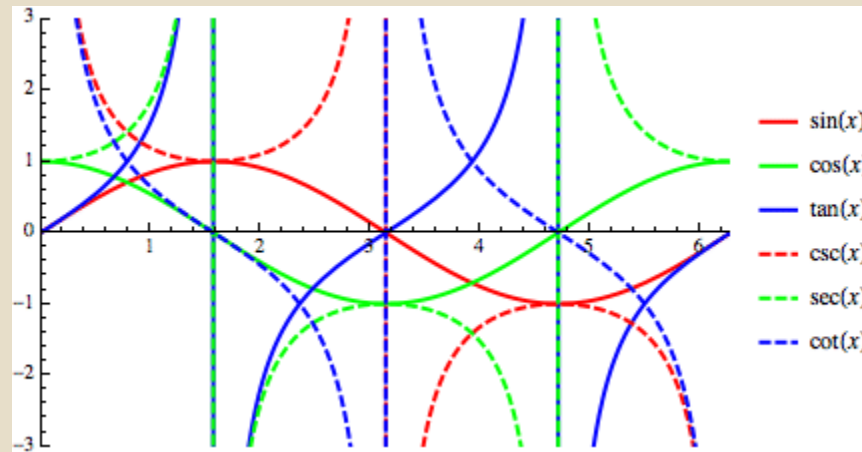
**Unit 11: Trigonometric Functions**

**Unit 12: Graphs of Trigonometric Functions**

**Unit 13: Trigonometric Identities**

**Unit 14: Trigonometric Equations**

**Unit 15: Trigonometric Applications**





# **New Curriculum: Geometry/Trigonometry**



## **What changes were made to Geometry?**

- **Scaled back on the amount of time spent on certain topics**
- **Removed formal logic from the curriculum, since it is no longer a part of the Common Core Learning Standards**

**\*No changes needed to be made to Trigonometry. It was simply shifted to this new course.**

# Geometry/Trigonometry



- **3 levels: Geo/Trig Enhanced Honors**  
**Geo/Trig Enhanced**  
**Geo/Trig**
- **At the end of each Geo/Trig course, students will sit for a school-based final exam**
- **Following Geo/Trig, most students will enroll in some version of PreCalculus**

# Geometry/Trigonometry Honors



- **This course will take an in-depth approach to each topic taught in the Geo/Trig Enhanced course**
- **Additional topics such as frustum, cross sections/rotations, concurrency theorems, completing the square with parabolas and describing the resulting transformations will be included**

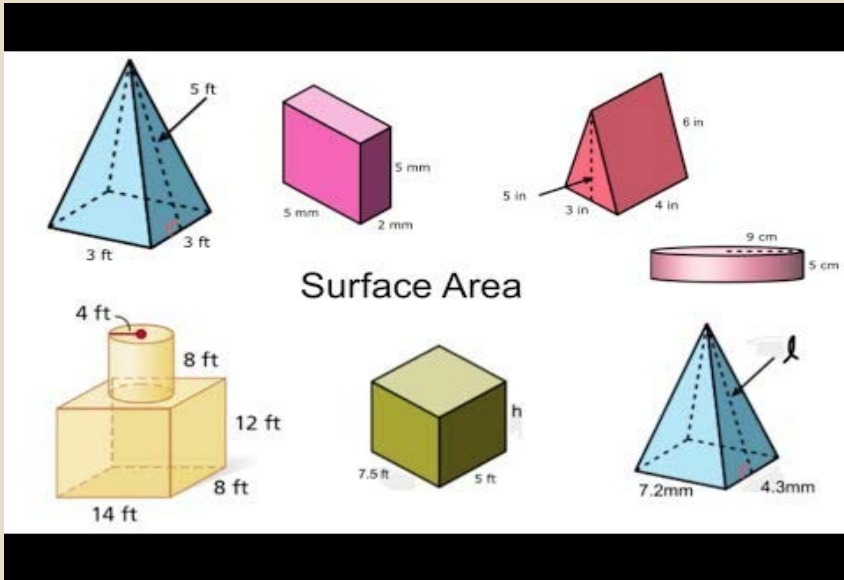
# Geometry/Trigonometry Honors



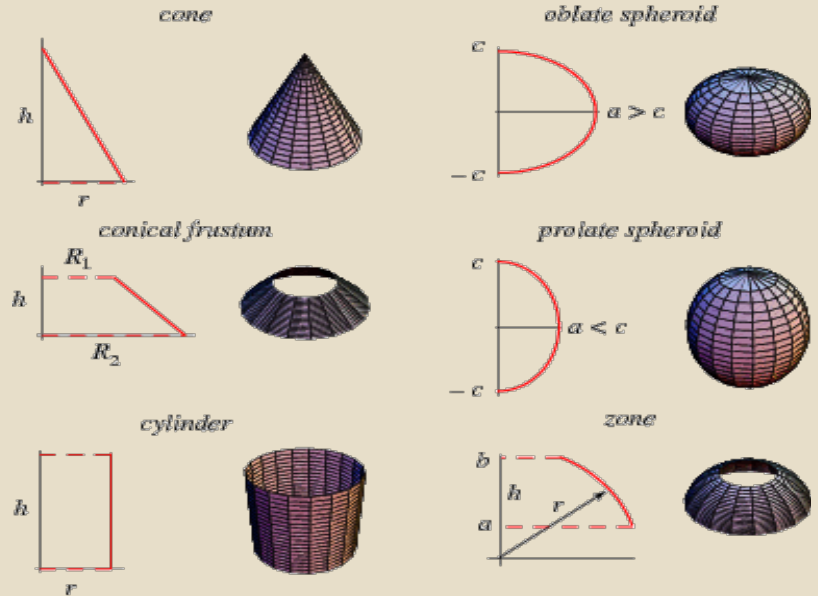
**Enhanced**

**versus**

**Honors**



**Find the surface area and  
Volume of each figure**

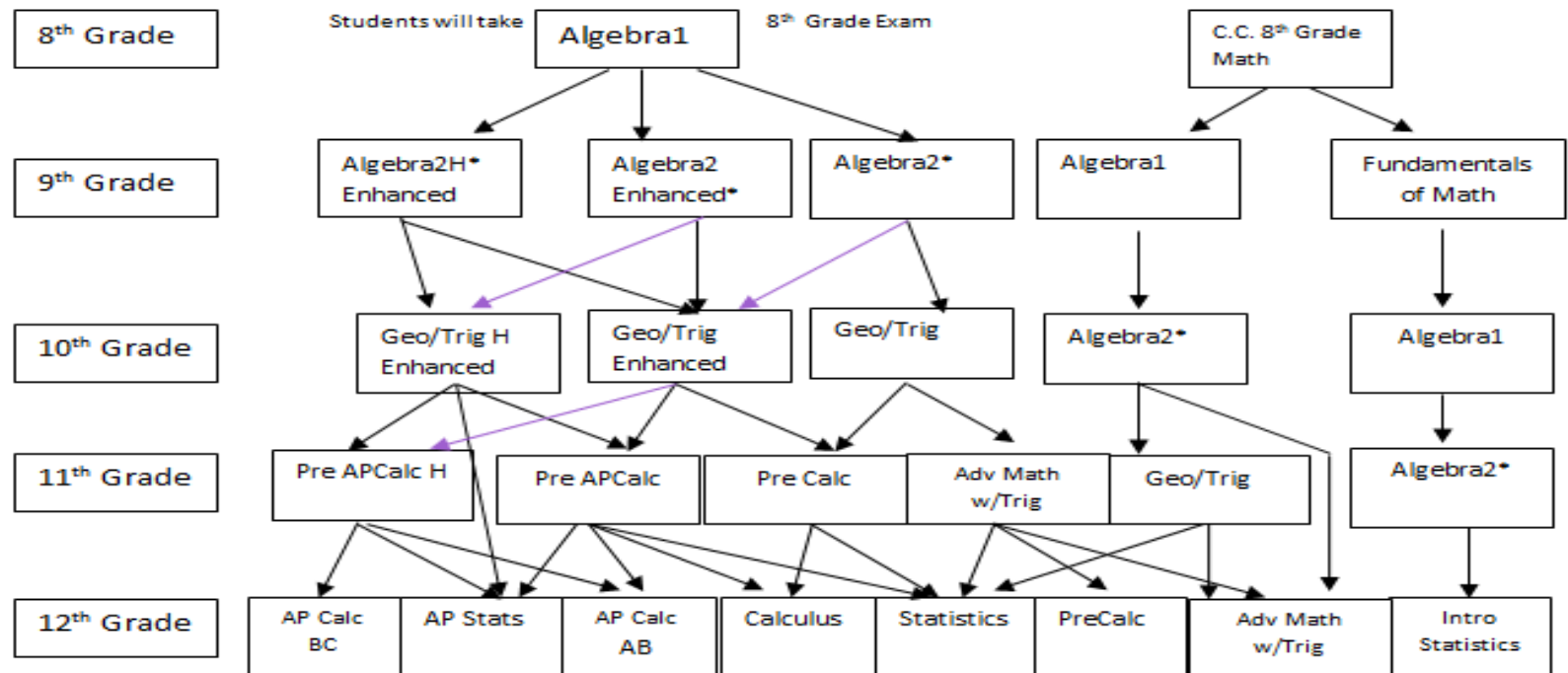


**Given the 2-dimensional figure,  
determine the volume of the 3-D  
solid that is created when rotated  
about the given axis.**

# New Pathways



## New Revised Math Pathways for Freshmen Beginning 2016 - 2017



\*Students will take Common Core Algebra Regents at the end of Algebra 2.

—————> Indicates movement is possible