Outline for Geometry Unit: Familiarize yourself with the Formulae Booklet (I won’t give any more formulas) AND REMEMBER to give your final answers with UNITS!!!

1. Pythagoras and its converse:
2. Pythagoras Theorem is used to find lengths in RIGHT triangles. You need to have the lengths of 2 sides in order to solve for the 3rd length, unless the triangle is ISOSCELES RIGHT.
3. Converse of Pythagoras: It is very rare that you would get a question on the converse. The converse of the theorem is used to determine if the triangle is right or not given the 3 lengths.



1. Trigonometry for RIGHT Triangles: SOH-CAH-TOA (formulas **not** in the booklet)
	1. Find lengths: given an angle and a length
	2. Find angles: given 2 lengths
2. Trigonometry for NON-RIGHT Triangles: (formulas in the booklet)
	1. Sine Law: TRICK -you must have 2 pairs (angle –its opposite side)
	2. Cosine Law: SSS or SAS TRICK- you must see a sandwich.
3. 2D-work: Perimeter and Areas; many composite shapes.
	1. Perimeter: The formulas are not in your booklet
	2. Area: (These formulas are in the “Presumed Knowledge” of your booklet)
	3. Apply Pythagoras to find Area and Perimeters

Isosceles and equilateral triangles have something special! What is it?

* 1. Apply SOH-CAH-TOA to find Areas and Perimeters
	2. Apply Pythagoras & SOHCAHTOA to other shapes,

including circles and their chords and tangents. The perpendicular segment to a chord from the center of a circle always bisects the chord and the angle formed by the two radius. Diagonals in Rectangles (these are **not** angle bisectors), diagonals in Squares (these are angle bisectors), diagonals in rombhuses (intersect at 90º angles)

1. 3D-work: Solids:
	1. You must be able to apply Pythagoras to 3D figures-solids! Visualization is KEY, and then please decode your 3D intto 2D.
	2. You must be able to apply SOH-CAH-TOA in 3D figures-solids!
	3. Surface area: only a few formulas (are in your booklet.
	4. Volume: Most of these formulas are in your booklet.

Cube, Square Prisms, Rectangular Prisms or cuboids, Triangular Prisms, Cylinders, Square Base Pyramids (these are the most common) Triangular Base Pyramids, Cones, Spheres…..