Geometry EOC… a few topics to memorize
These are not on your reference sheet!!

Conditional Statement: $p \rightarrow q$
If today is Monday, then tomorrow is Tuesday

Converse: $q \rightarrow p$
If tomorrow is Tuesday, then today is Monday

Inverse: $\sim p \rightarrow \sim q$
If today is **not** Monday, then tomorrow is **not** Tuesday

Contrapositive: $\sim q \rightarrow \sim p$
If tomorrow is **not** Tuesday, then today is **not** Monday

Remember, the Converse and Inverse got married, and had a Contrapositive.

All Parallelograms:
- Opposite sides are parallel
- Opposite sides are congruent
- Opposite angles are congruent
- Consecutive (adjacent) angles are supplementary
- Diagonals bisect each other

Rhombus:
- All sides are congruent
- Diagonals bisect the angles
- **Diagonals are perpendicular!!**

Rectangle:
- All angles are congruent
- **Diagonals are congruent!!**

Square:
- All of the properties of a Rhombus and a Rectangle

Remember, the Rhombus and Rectangle got married, and had a Square.

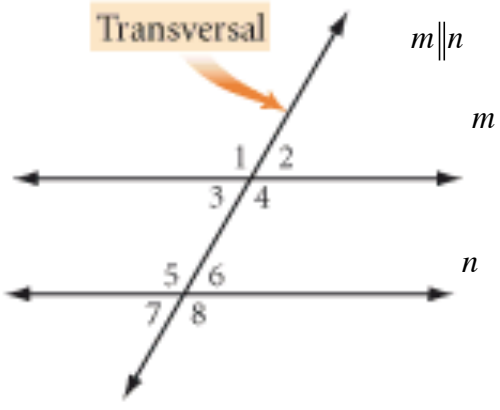
Regular Polygon – Both equilateral AND equiangular

Corresponding Angles are congruent
$\angle 1 \cong \angle 5$, $\angle 2 \cong \angle 6$, $\angle 3 \cong \angle 7$, $\angle 4 \cong \angle 8$

Alternate **Interior** Angles are congruent

$\angle 3 \cong \angle 6$, $\angle 4 \cong \angle 5$

Alternate **Exterior** Angles are congruent
$\angle 1 \cong \angle 8$, $\angle 2 \cong \angle 7$



Euler's Formula

$F + V = E + 2$

Platonic Solids:

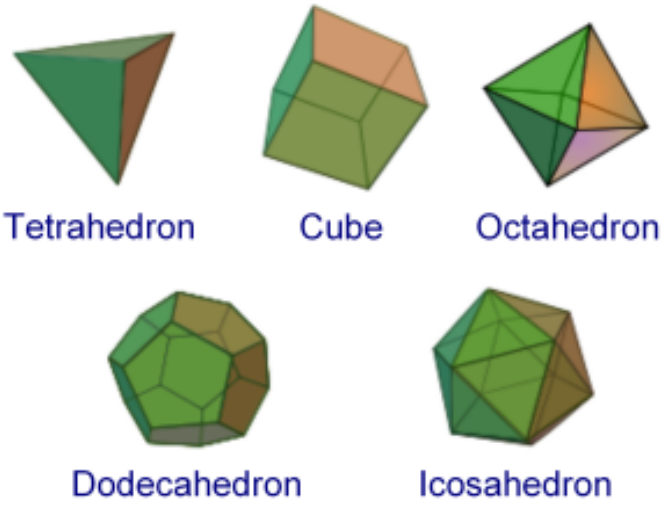
Tetrahedron (aka triangular pyramid) – 4 faces

Hexahedron (aka CUBE!) – 6 faces

Octahedron – 8 faces

Dodecahedron – 12 faces

Icosahedron – 20 faces



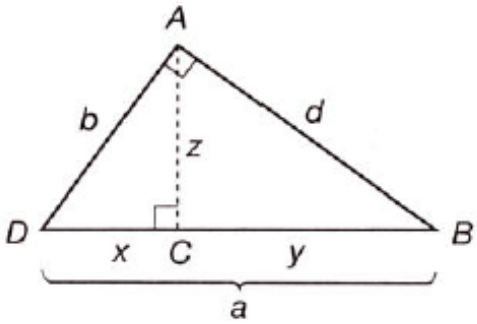
Equation of a Circle: $(x-h)^2 + (y-k)^2 = r^2$

Pythagorean Theorem: $a^2 + b^2 = c^2$

Area of a Sector = $\frac{arcMeasure}{360^\circ} \bullet \pi r^2$

Arc Length = $\frac{arcMeasure}{360^\circ} \bullet 2\pi r$

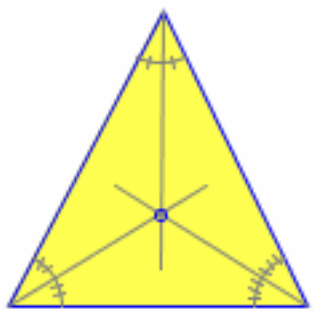
Geometric Mean:



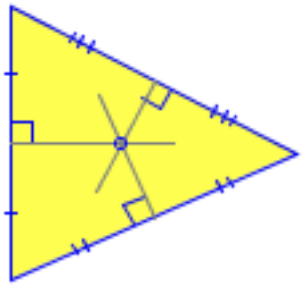
$$\frac{x}{z} = \frac{z}{y}$$

Concurrent Lines and Points of concurrency

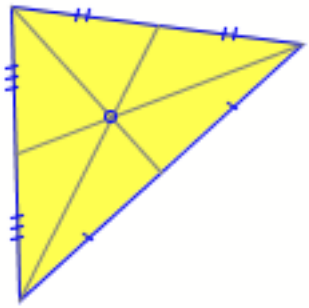
The Angle Bisectors of a triangle intersect at the Incenter. The incenter is the center of an inscribed circle.



The Perpendicular Bisectors of a triangle intersect at the Circumcenter. The Circumcenter is the center of a circumscribed circle.



The Medians of a triangle intersect at the Centroid



The Altitudes of a triangle intersect at the Orthocenter