**Geometry Part III**

**Angles**

**Angles Formed By Parallel lines cut by a transversal line**

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Exterior angles: outside angles

Ex. 1, 2, 7, and 8

Interior angles: inside angles

Ex. 3, 4, 5, and 6

**Alternate Pairs: This helps solve for the missing angle. The pair of alternate angles have always the same measurement in vortex.**

Alternate pairs are the opposite vertical angles

* Alternate Exterior Angles

Ex. 1 and 8

* Alternate Interior Angles

Ex. 4 and 5

**The transversal line:** Line segment “t”

**Two parallel line:** Line segment “m” and “n”

**Polygons:** a plain straight shape

**Triangles**



Equilateral: All sides are equal

Iscoceles: Two sides are equal

Scalene: No sides are equal

**ANGLE TRIANGLES**

Right: has a side with 90º

Obtuse: has a side with an obtuse angle

Acute: all sides are acute (equilateral, isoceles)

**Exterior and Interior Opposite Pairs**



**D**

All the three interior angles (A,C,B) adds up to 180º

If you add “D” that becomes an exterior angle, ACD is formed

**Properties of Quadrilaterals:** it is a closed geometric figure bound with 4 line segments

The sum of an interior angle quadrilateral is 360º



**Pythagorean Theorem:** Only use this when it is a right triangle

**Hypotenuse**

 5

3

4

**Use this to find a side, usually “Hypotenuse”**

**Equation:** $3^{2 }+ 4^{2}= n^{2}$

**How to do it:**

Get the square of 5 = 3 x 3 = 9

Get the square of 4 = 4 x 4 = 16

Add 16 + 9 = 25

25 is the square of the missing number. So get the square root of 25.$\sqrt{25}$

Getting the square root is 5