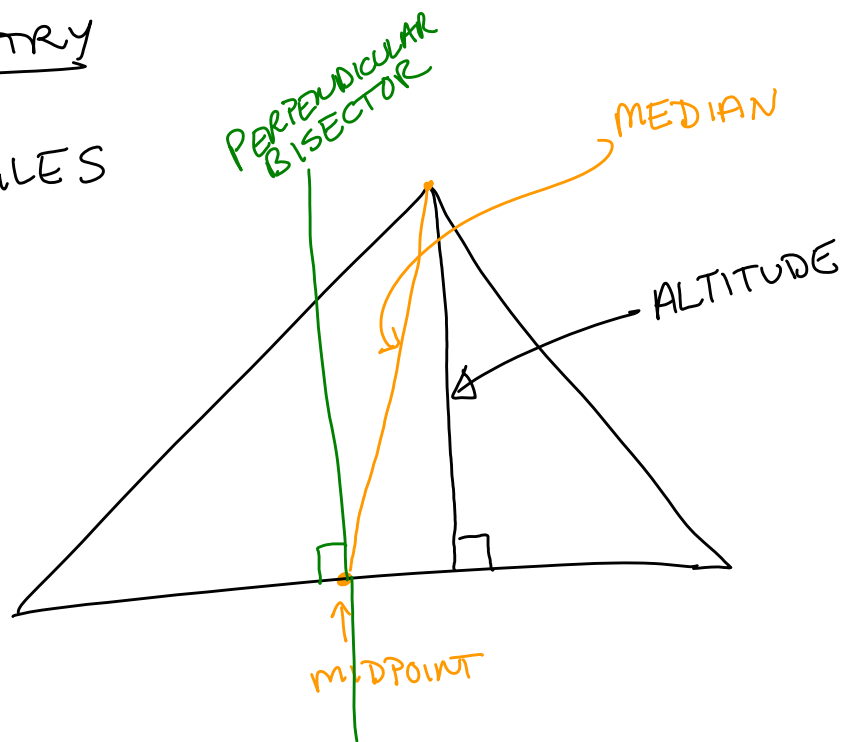


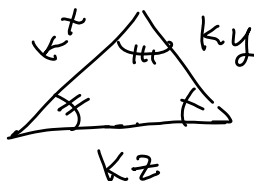
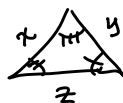
GEOMETRY

TRIANGLES

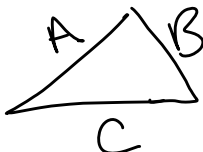


CONGRUENT - SAME SHAPE & SIZE

SIMILAR - SAME SHAPE, POSSIBLY DIFFERENT SIZES



SOME FIXED
REAL k .



$$\frac{A}{a} = \frac{B}{b} = \frac{C}{c}$$

$$\frac{A}{B} = \frac{a}{b}$$

ANGLES

ACUTE - MEASURE of ANGLE is $< 90^\circ = \frac{\pi}{2}$

OBTUSE - MEASURE of ANGLE is $> 90^\circ = \frac{\pi}{2}$

RIGHT - MEASURE = 90°

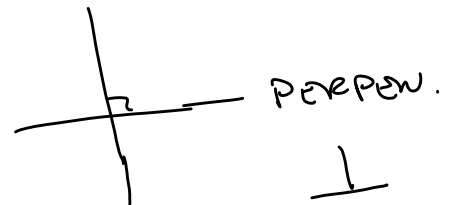
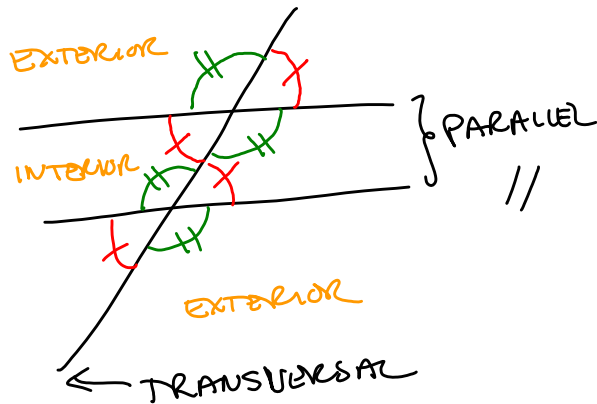


COMPLEMENTARY - 2 ANGLES THAT ADD TO $90^\circ = \frac{\pi}{2}$



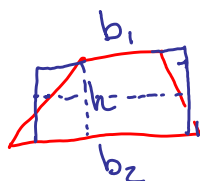
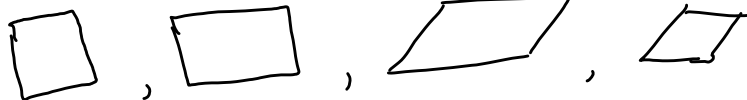
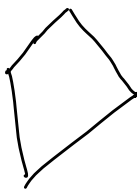
SUPPLEMENTARY - 2 ANGLES THAT ADD TO $180^\circ = \pi$

LINES

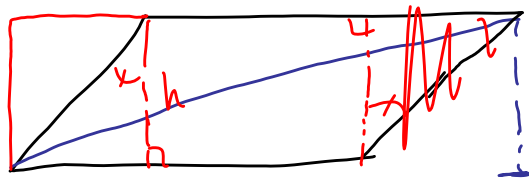


POLYGONS

QUADRILATERALS (4-SIDES)



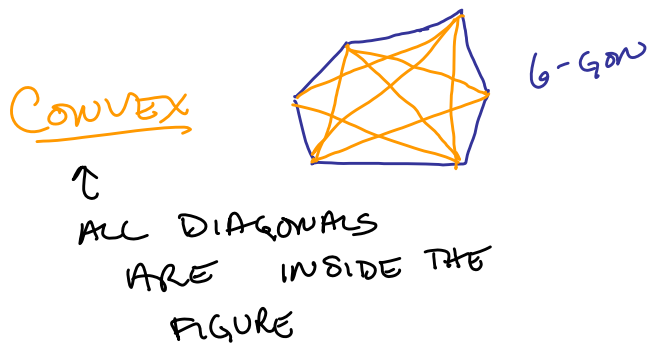
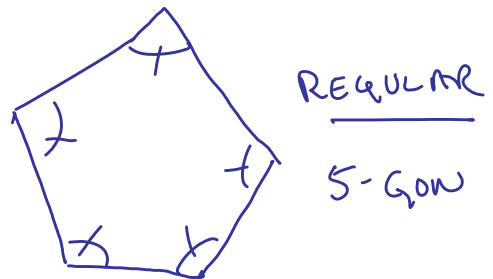
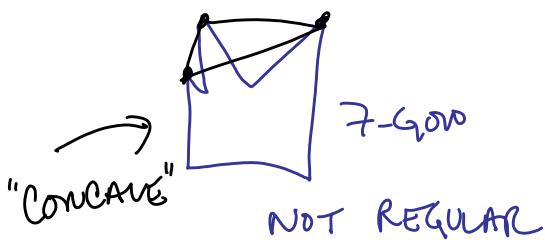
$$A = \frac{b_1 + b_2}{2} \cdot h$$



$$\text{AREA} = \text{BASE} \cdot \text{HEIGHT}$$

n-GONS

n-SIDED FIGURE
REGULAR n-GON



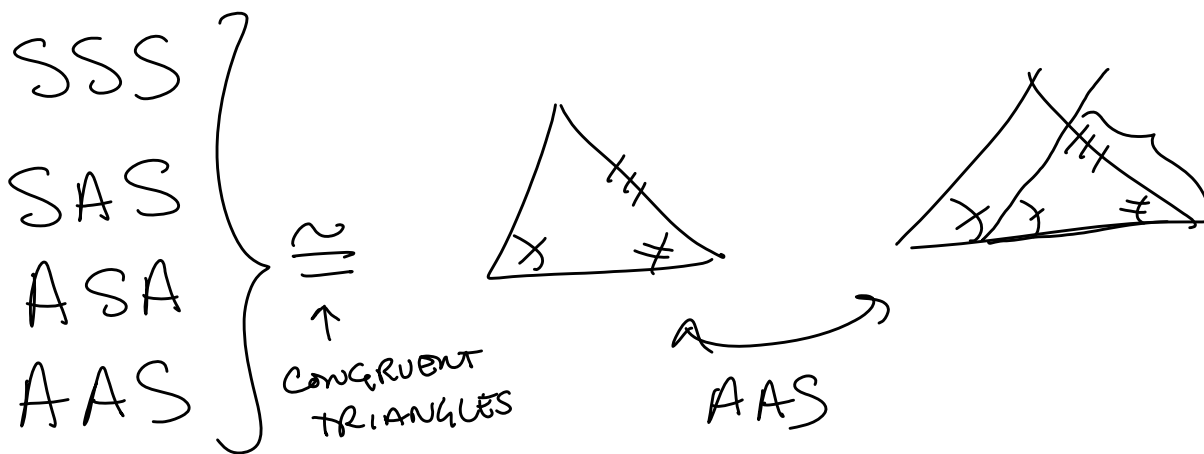
MEASURE OF INTERIOR
ANGLE OF A REGULAR
n-GON IS $\frac{(n-2) \cdot 180}{n}$.

TRIANGLES

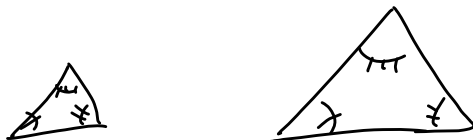
EQUILATERAL - REGULAR 3-GON - ALL ANGLES THE SAME

ISOSCELES - 2 SIDES SAME LENGTH
2 ANGLES SAME MEASURE

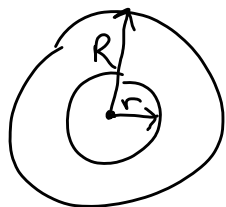
SCALENE - NOT EQUILATERAL OR ISOSCELES



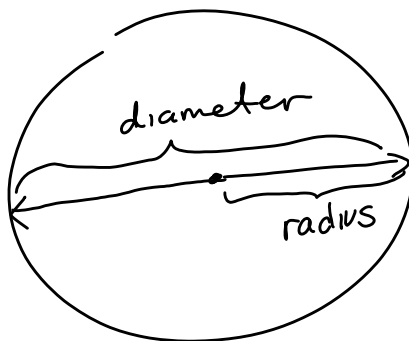
AAA — SIMILAR TRIANGLES



CIRCLES



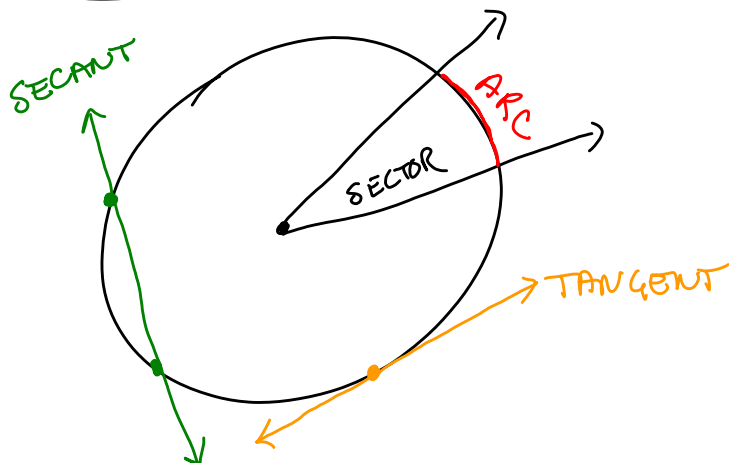
↑
CONCENTRIC

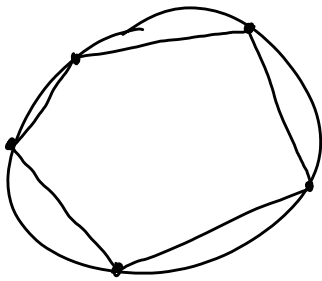


CIRCUMFERENCE

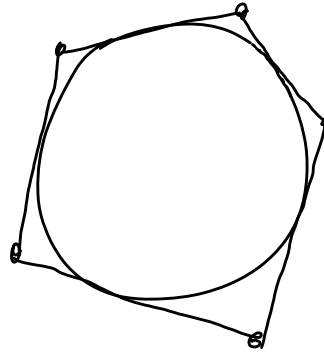
$$2\pi r$$

AREA πr^2



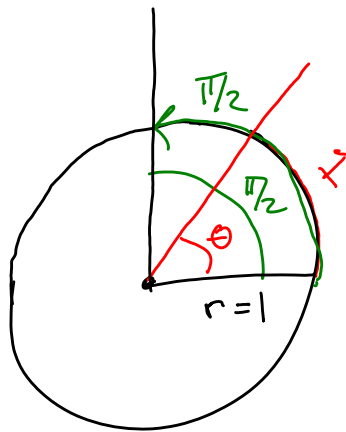


INSCRIBED
POLYGON

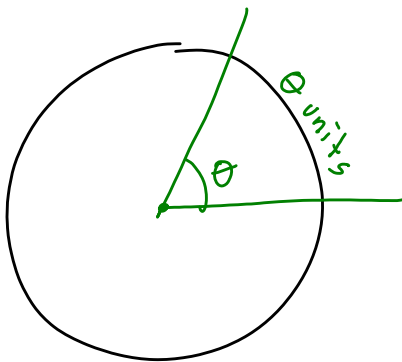


CIRCUMSCRIBED
POLYGON

RADIANS
MEASURE
of ANGLE



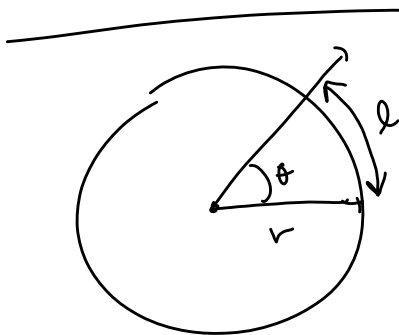
$$\text{Circumf.} = 2\pi$$



$$\frac{\overset{d}{\Theta(\text{in deg})}}{360^\circ} = \frac{\overset{a}{\Theta(\text{in rad})}}{2\pi}$$

$$d = \frac{180}{\pi} a$$

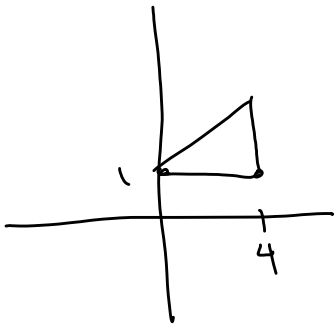
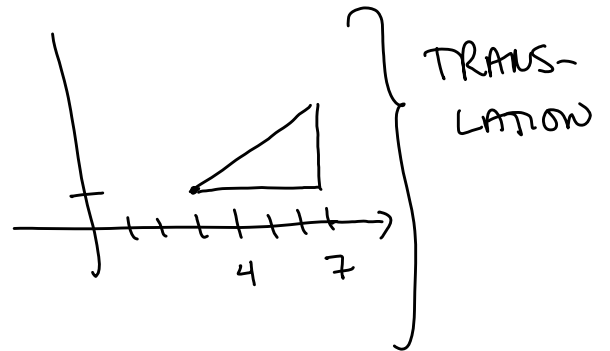
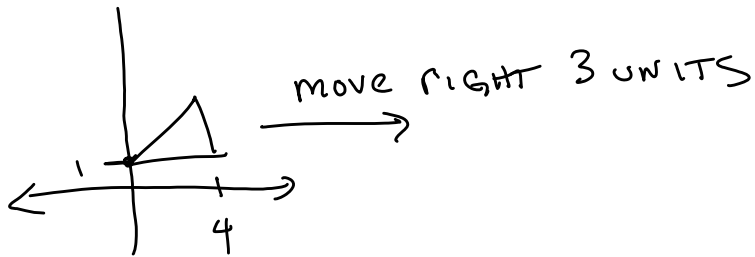
$$a = \frac{\pi}{180} d$$



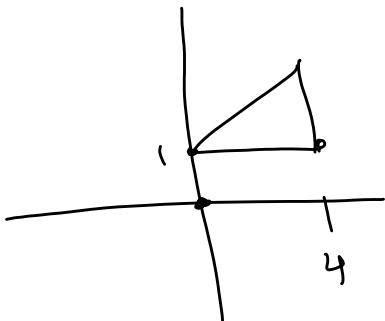
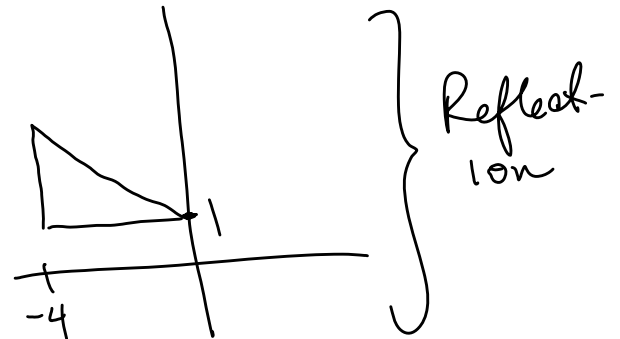
$$l = \theta r \quad \text{in RADIANS}$$

TRANSFORMATIONS

RIGID MOTIONS



REFLECT
ACROSS
y-AXIS



ROTATE
90° CLOCKWISE
ABOUT
ORIGIN
(0,0)

