

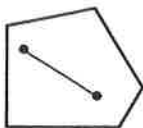
Name _____

Angles in Polygons

15-16

Remember

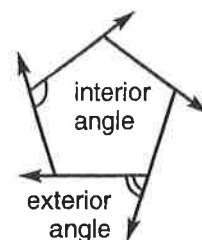
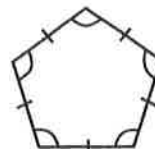
A polygon is *convex* if a segment connecting any two points in the interior of the polygon is completely in the interior.










A polygon that is not convex is *concave*.



A *regular* polygon is equilateral and equiangular.



Divide each polygon below into triangles by drawing diagonals from one vertex. Then complete the chart.

Polygon	Number of sides n	Number of triangles $n - 2$	Interior angle sum of a convex polygon $(n - 2) \cdot 180^\circ$	Measure of each interior angle in a regular polygon $\frac{(n - 2) \cdot 180^\circ}{n}$	Exterior angle sum of a convex polygon 360°	Measure of each exterior angle in a regular polygon $\frac{360^\circ}{n}$
 triangle					360°	
 quadrilateral					360°	
 pentagon	5	3	$3 \cdot 180^\circ = 540^\circ$	$540^\circ \div 5 = 108^\circ$	360°	$360^\circ \div 5 = 72^\circ$
 hexagon					360°	
 octagon					360°	
 decagon					360°	
 dodecagon					360°	