



Angle Measures in Polygons



Name _____



Regular Polygon	# of sides	Diagram	# of triangles formed	Sum of the measures of the interior angles	Measure of each interior angle for a regular polygon	Measure of each exterior angle	Sum of the measures of the exterior angles
quadrilateral	4		2	$2(180) = 360$	$\frac{360}{4} = 90$	$\frac{360}{4} = 90$	360
pentagon	5		3	$3(180) = 540$	$\frac{540}{5} = 108$	$\frac{360}{5} = 72$	360
hexagon	6		4	$4(180) = 720$	$\frac{720}{6} = 120$	$\frac{360}{6} = 60$	360
heptagon	7		5	$5(180) = 900$	$\frac{900}{7} = 128\frac{4}{7}$	$\frac{360}{7} = 51\frac{3}{7}$	360
octagon	8		6	$6(180) = 1080$	$\frac{1080}{8} = 135$	$\frac{360}{8} = 45$	360
n-gon	n		n-2	$(n-2)180$	$\frac{(n-2)180}{n}$	$\frac{360}{n}$	360

- The sum of the measures of the interior angles of a convex n-gon is $(n-2)180$.
- The measure of each interior angle of a regular n-gon is $\frac{(n-2)180}{n}$.
- The measure of each exterior angle of a regular n-gon is $\frac{360}{n}$.
- The sum of the measures of the exterior angles of a convex polygon is 360 .

