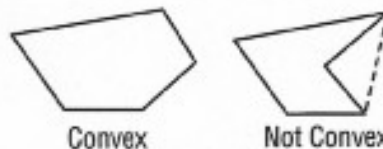




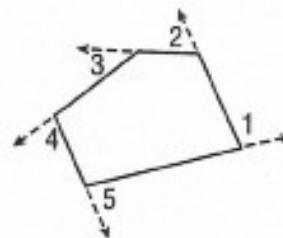
# 6-1 Properties and Attributes of Polygons

A *convex polygon* is a polygon in which no diagonal contains points in the exterior of the polygon.



1. On the back of this paper draw a regular pentagon (any 5 sided convex object).

2. Use the straightedge to extend consecutive sides of the polygon, as shown. This forms five exterior angles,  $\angle 1$  through  $\angle 5$ .



3. Use a protractor to measure the exterior angles. What is the sum of the measures of the exterior angles?

4. Repeat the process with convex polygons that have 3, 4, and 6 sides. Record your results in the table.

Number of Sides	3	4	5	6
Sum of Exterior Angle Measures				

5. Compare your results with those of other students. What do you notice?

## THINK AND DISCUSS

6. Explain how you can use what you discovered to find  $m\angle 1$ .

