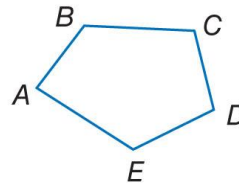


## Activity 31 – Key Concepts

### Theorem 6.1 Polygon Interior Angles Sum

The sum of the interior angle measures of an  $n$ -sided convex polygon is  $(n - 2) \cdot 180$ .

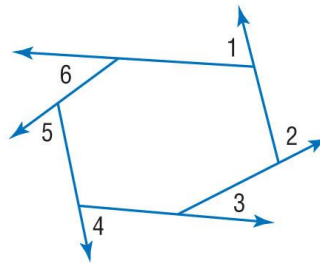
**Example**  $m\angle A + m\angle B + m\angle C + m\angle D + m\angle E = (5 - 2) \cdot 180$   
 $= 540$



### Theorem 6.2 Polygon Exterior Angles Sum

The sum of the exterior angle measures of a convex polygon, one angle at each vertex, is 360.

**Example**  
 $m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 + m\angle 5 + m\angle 6 = 360$



### KeyConcept Area of a Regular Polygon

**Words** The area  $A$  of a regular  $n$ -gon with side length  $s$  is one half the product of the apothem  $a$  and perimeter  $P$ .

**Symbols**  $A = \frac{1}{2}a(ns)$  or  $A = \frac{1}{2}aP$ .

