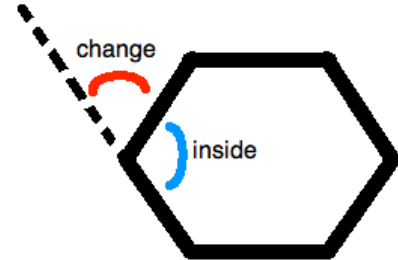# Adding angles

Assume for this worksheet that we are in
Euclidean Space.

We can define several angles given a polygon.
We are pretty familiar with the "inside" angles.
Let the "change" angle be the angle of rotation
when pivoting or changing from one side to
another as we travel clockwise around the polygon.
Both angles are identified in the figure
to the right.

1. [5] Find the sum of "change" angles for a polygon with n sides. *Justify* your answer.

2. [4] Use the results from above to find the sum of "inside" angles for a polygon with n sides. *Justify* your answer.

Consider a shape like that shown below. Note that this shape is *still* a polygon. Review your answers above to make sure your justification for each problem still work for shapes like this!