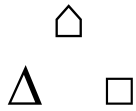


Name(s):



Polygon Central



Use the tiling pieces to investigate which combination of polygons will tile the plane (cover the plane with no gaps). Recall that a **vertex** is a place where the “corners” of the different polygons come together.

Step 1: In your groups, establish the angle measures of the following regular polygons. (Hint: If you don't remember all of them, you may want to use the blocks to help).

Each interior angle of a regular triangle measures _____.

Each interior angle of a square measures _____.

Each interior angle of a regular hexagon measures _____.

Step 2: Fill in the first few rows of the following chart. Use the tiles to help.

Step 3: Try combinations of tiles that are not listed. List those in the chart as well, regardless of whether or not they tile.

<i>Regular polygons used</i>	<i>Does it tile? If so, sketch</i>	<i>Sum of the angles at the vertex:</i>
Triangles		
Squares		
Hexagons and squares		

Step 4: Based on the pattern above, complete the following conjecture:

“In a tessellation, the sum of the angles at a vertex must _____”