

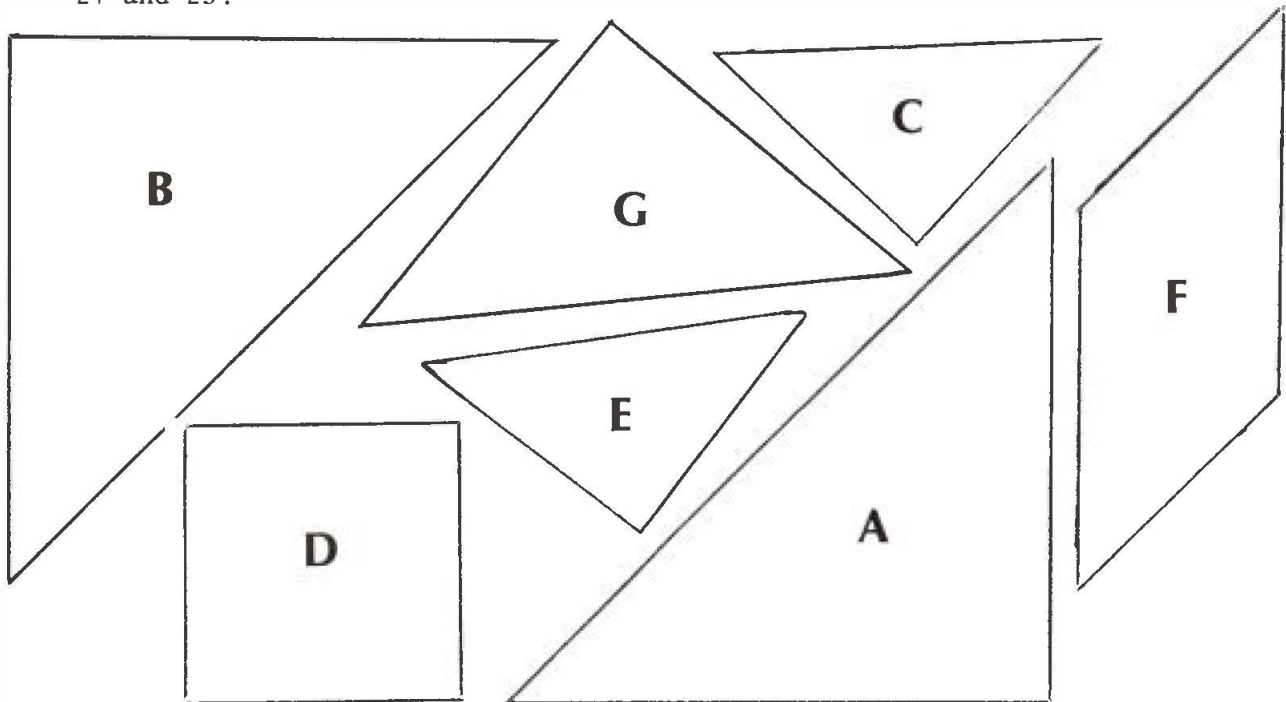
Patterns in the Angles of Regular Polygons

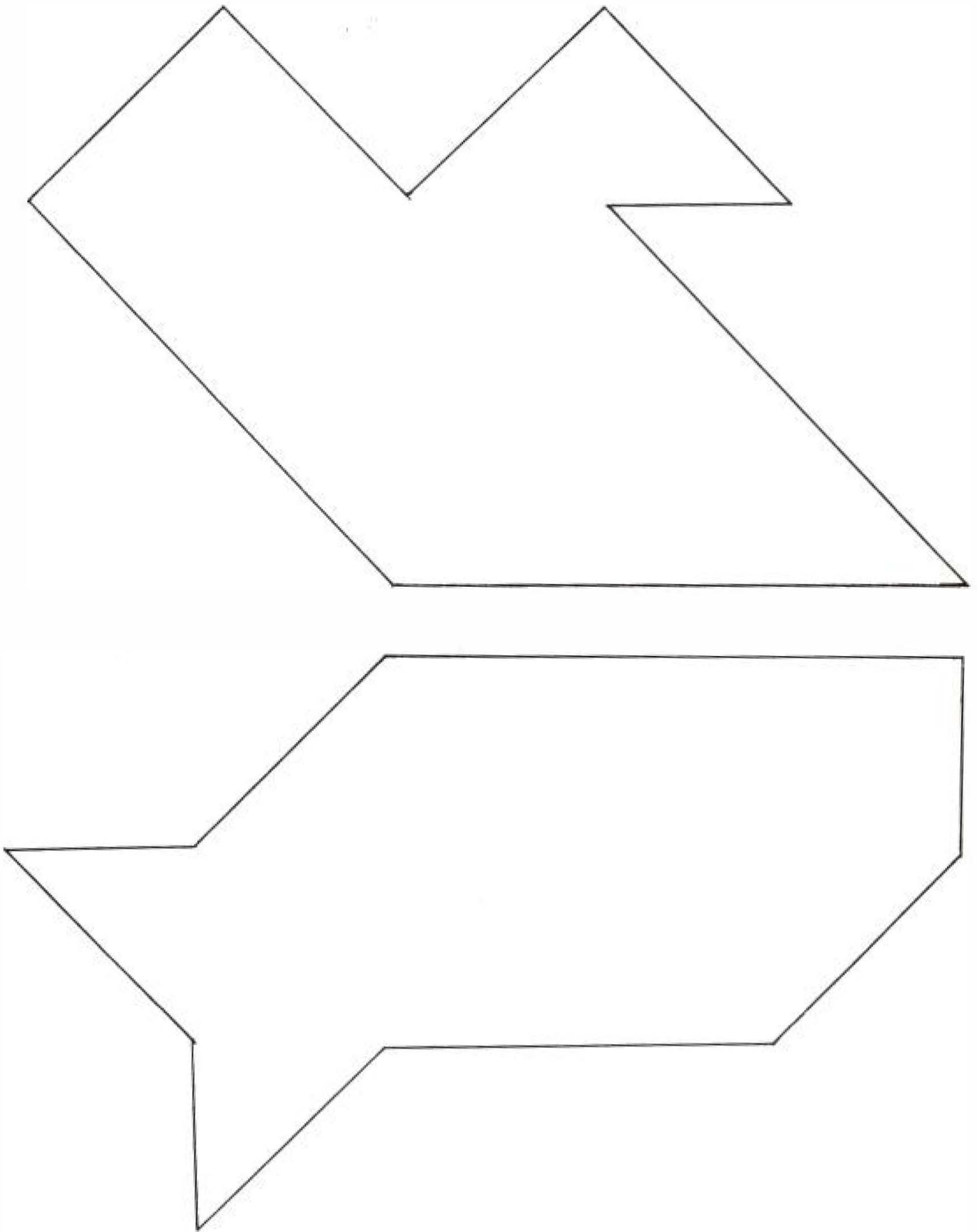
- Construct regular polygons of 3, 4, 5, 6, 7, and 8 sides. Choose any point P in each polygon. Join P to each vertex. How many triangles are formed in each polygon? The angle sum of each triangle is how many right angles?
- Complete the following table, using right angles instead of degrees for angle sums.

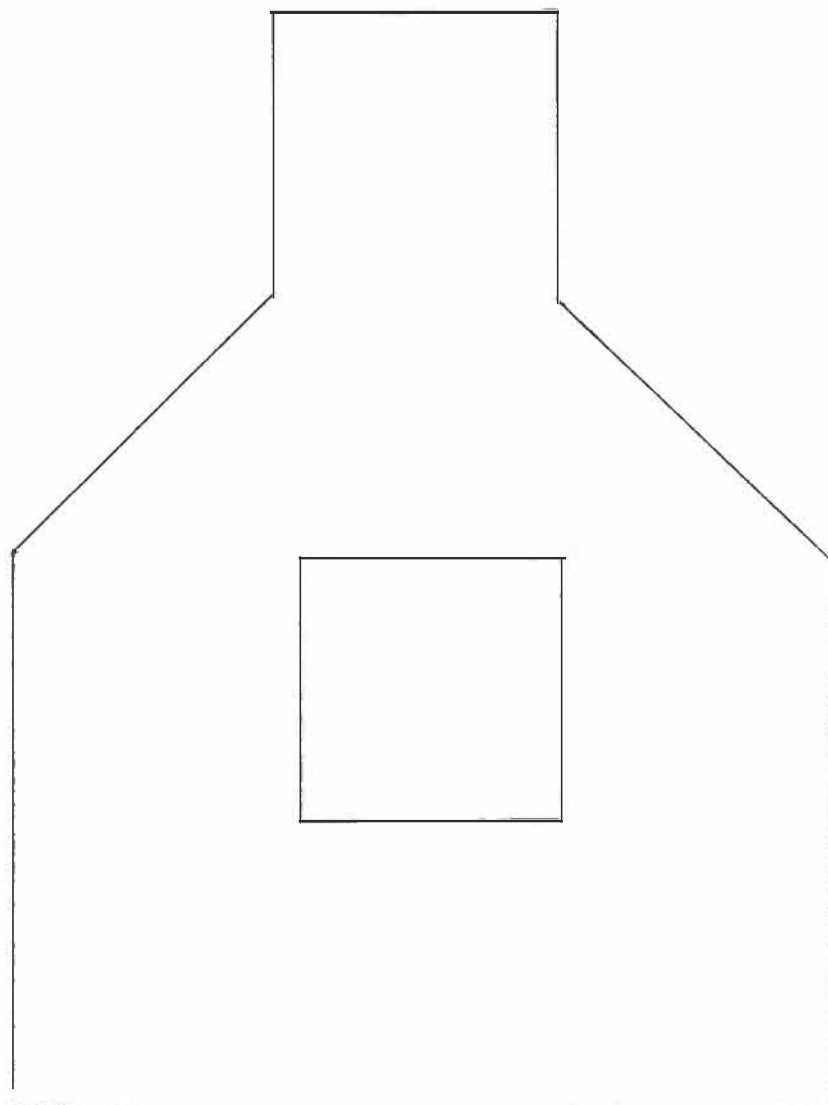
No. of sides of polygon	No. of triangles	Angle sum of triangles	Angle sum at P	Angle sum of int. angles
3	3	6 rt. angles	4 rt. angles	2 rt. angles
4				
5				
6				
7				
8				

- Find the pattern. What is the sum of the interior angles of polygons of 10, 20, 100 sides?
- Graph the size of the interior angles against the number of sides. What conclusions do you draw?
- Can you find the sum of the interior angles of non-regular polygons?

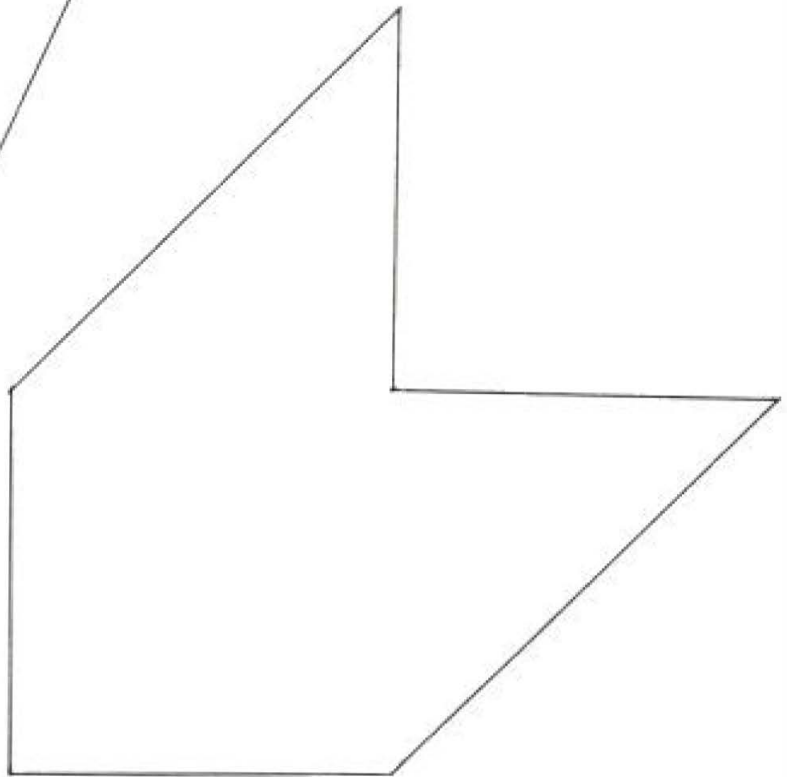
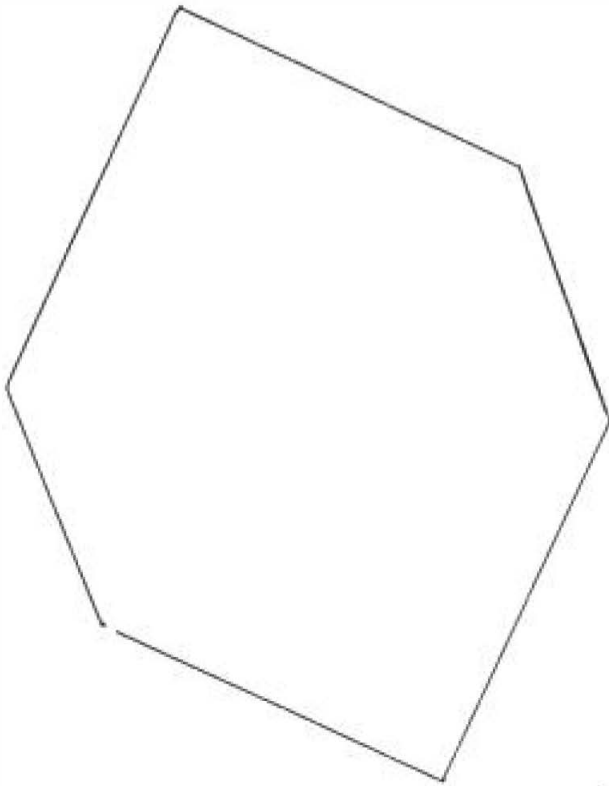
Trace, cut out, and then use these seven pieces to make the figures on pages 24 and 25.



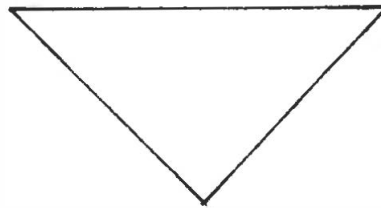
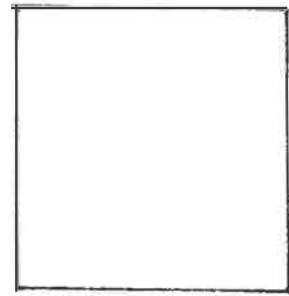
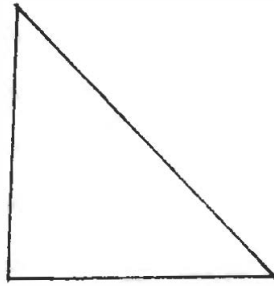
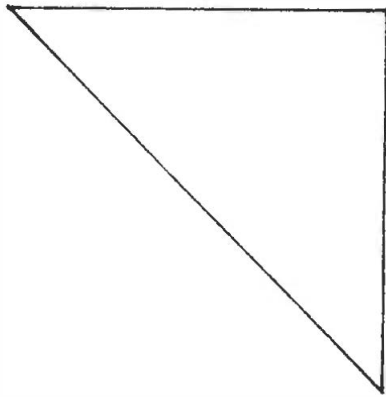




Use only the five smaller shapes (C, D, E, F, G) to make these figures.



Use:



To Make:

