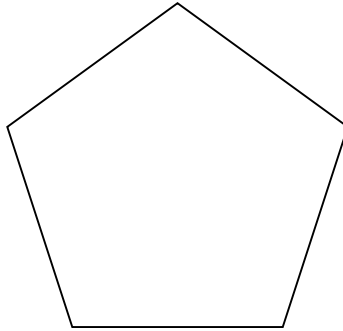
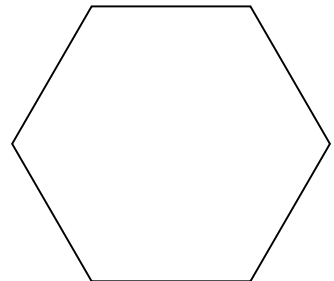
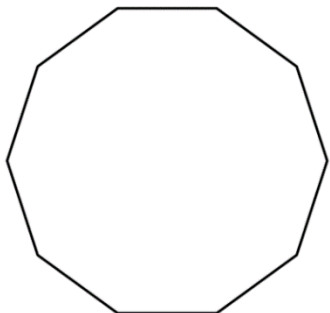


OUTCOME: Determine the Angle Between Two Sides of a Regular Polygon

1. Draw five equal (not equilateral!) triangles raying out from the center of the below polygon. Use this diagram to determine the angle between the sides of the polygon.

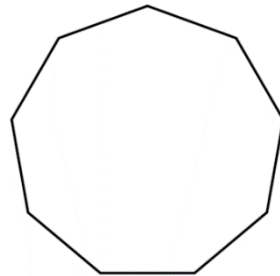
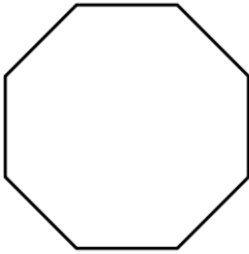


- How many triangles did you draw? _____
 - What is the total sum of all angles in the above triangles? _____
 - By subtracting out all the central triangle angles, we are left with the interior polygon angles.
 - What is the angle between two sides in a regular pentagon? _____
2. Use the above method to determine the angle between the sides of each of the below polygons.
- How many triangles.
 - Sum of all triangle angles.
 - Take away the 360 for the central angle.
 - What is the angle between two sides?



3. Develop a formula to find the angle between two sides of any regular polygon of n sides:

4. Use the formula to determine the angle between two consecutive sides:



5. Determine the angle between two sides of a 30-sided regular object.

6. Each interior angle of a regular convex polygon measures 144° . How many sides does the polygon have?

7. Find the measure of all angles x , y and z :

