

**KHM Interior Angle Sum Lab**









For each polygon shown, divide it into triangles by drawing all the diagonals of the polygon from one vertex. Use that information to fill out the table below for polygons A- F.

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| --- | --- | --- | --- | --- | --- |
| **Shape**  **Letter** | **Polygon** | **# of sides** | **# of triangles** | **Angle sum**  **(🡨 x 180)** | **Measure of each angle** |
| A | Triangle |  |  |  |  |
| B | Quadrilateral |  |  |  |  |
| C | Pentagon |  |  |  |  |
| D | Hexagon |  |  |  |  |
| E | Heptagon |  |  |  |  |
| F | Octagon |  |  |  |  |
|  | Nonagon | 9 |  |  |  |
|  | Decagon | 10 |  |  |  |
|  | n-gon | n |  |  |  |

Now fill in the table for a nonagon and a decagon by using the pattern you observed in the table for polygons A-F. Then write an expression that gives the general rule for finding the angle sum of a polygon with *n* number of sides.

