The Sum of the Interior Angles of a Polygon

*Learning Goal: To be able to find the connection between the interior angles of a polygon and the number of sides.*

Task 1

* Draw each shape
* Divide into triangles by connecting one vertex to other vertices to form triangles.
* Copy and complete the table.

|  |  |  |  |
| --- | --- | --- | --- |
| Name of shape | No. ofsides | Number oftriangles | Sum of interiorAngles |
| Triangle | 3 | 1 | 1 x180o =180o |
|  | 4 |  |  |
|  | 5 |  |  |
|  | 6 |  |  |
|  | 7 |  |  |
|  | 8 |  |  |
|  | n |  |  |

Task 2

* Your challenge is to find the formula for the interior angles of an n-sided shape. (hint-compare no. of triangles to no. of sides)
* Use your formula to find the interior angles of an icosagon(20 sides)
* How about a pentacontagon? (50 sides)