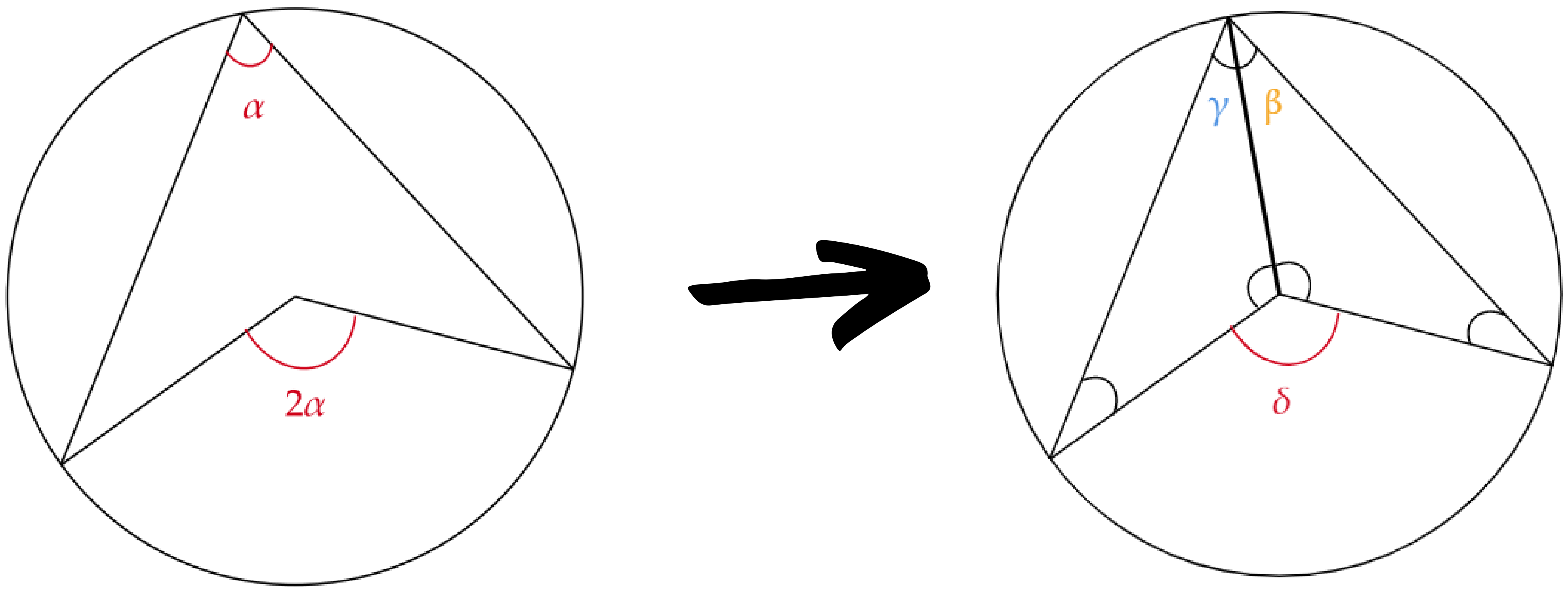
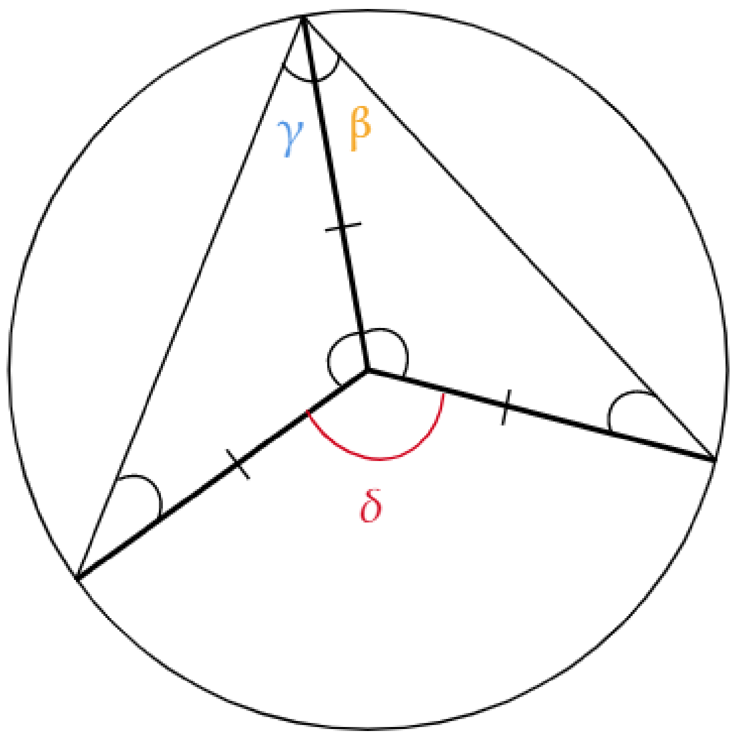


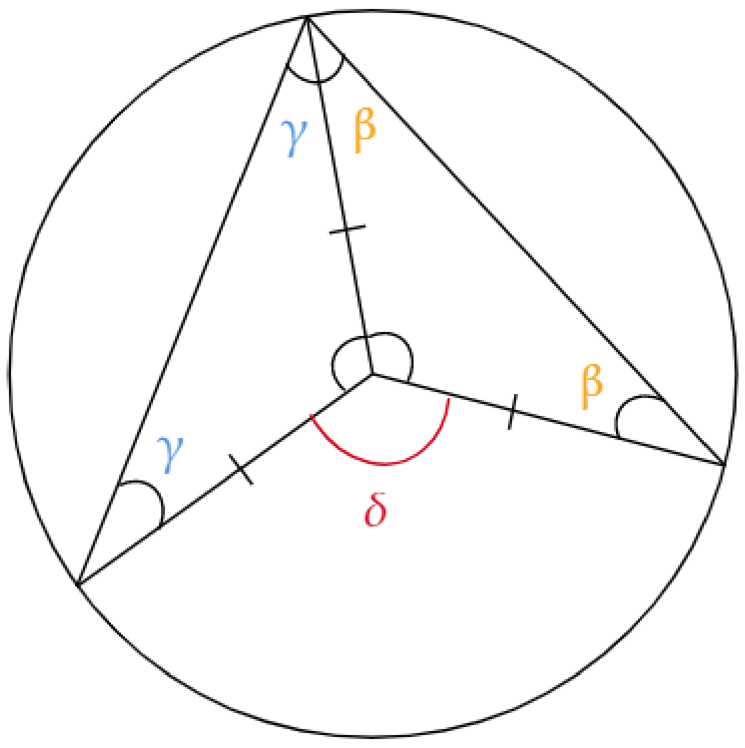
We have that $\alpha = \gamma + \beta$ and $\delta = 2\alpha$

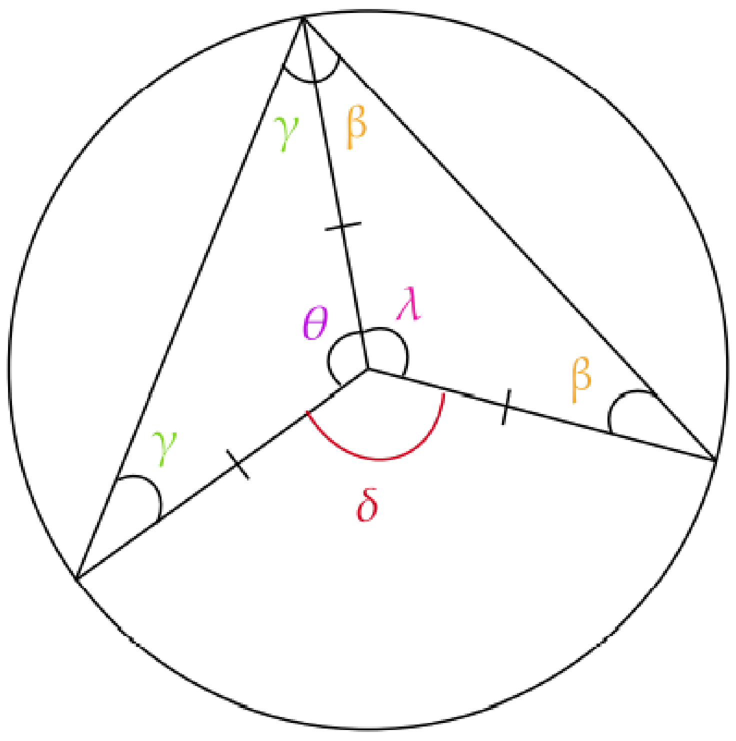
If we add a segment that goes from the center to the cicle border, we will have two triangles



As are inscribed angles, the bold lines have the same length which is the radius of the circle

Now we have two isosceles triangles, as they have two equal sides and two equal angles.





As the interior angles of a triangle add up to 180°

$$\Rightarrow \begin{array}{l} 2\gamma + \theta = 180^\circ \\ \theta = 180^\circ - 2\gamma \end{array} \quad \wedge \quad \begin{array}{l} 2\beta + \lambda = 180^\circ \\ \lambda = 180^\circ - 2\beta \end{array}$$

Remmembering that $\alpha = \gamma + \beta$ and $\delta = 2\alpha$ $\Rightarrow$ $\begin{array}{l} \delta = 2(\gamma + \beta) \\ 2\alpha = 2\alpha \end{array}$

But a complete turn is 360°

$$\Rightarrow \begin{array}{l} \delta + \theta + \lambda = 360^\circ \\ \delta = 360^\circ - \theta - \lambda \\ \delta = 360^\circ - (180^\circ - 2\gamma) - (180^\circ - 2\beta) \\ \delta = 360^\circ - 180^\circ + 2\gamma - 180^\circ + 2\beta \\ \delta = 2\gamma + 2\beta \\ \delta = 2(\gamma + \beta) \end{array}$$

$\therefore$ The angle at the center of a circle is twice the angle at the circumference