1172-30-139 Martin Chuaqui^{*}, mchuaqui@mat.uc.cl, Chile. Schwarz-Christoffel mappings and finite Blaschke products.

We study the classical representation formula for Schwarz-Christoffel mappings onto polygons that gives the pre-Schwarzian of the mapping as a sum of polar terms corresponding to the pre-vertices. For a convex *n*-gon we show that

$$\frac{f''}{f'} = \frac{B(z)}{1 - zB(z)} \,,$$

where B(z) is a finite Blaschke product of degree n-1, while for an arbitrary polygon one has

$$\frac{f''}{f'} = \frac{(B_1/B_2)(z)}{1 - z(B_1/B_2)(z)},$$

where $1 + \deg(B_1)$ and $\deg(B_2)$ account, respectively, for the number of convex and concave vertices in the image. Similar results hold for mappings onto the complement of polygons that are normalized to have $f(0) = \infty$. We will discuss also some open questions in this regard. (Received August 23, 2021)