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In the complex plane, C is a circle $|z| = 1$. A sequence: $z_1, z_2, z_3, \cdots z_n$ devide the circumference of C equally anticlockwise, and $z_1 = 1$. Set

$$I = \lim_{n\to\infty} \sum_{k=1}^{n} \frac{z_{k+1} - z_k}{z_k}$$

$$J = \lim_{n\to\infty} \sum_{k=1}^{n} \frac{z_{k+1} - z_k}{{z_k}^2}$$

Evaluate I and J.