

**Zadatak 7.** U geometrijskom je nizu  $a_1 = 1 - i\sqrt{3}$ ,  $q = \frac{1-i}{\sqrt{2}}$ . Odredi  $|a_{20}|$ .

**Rješenje.**  $a_1 = 1 - i\sqrt{3}$ ,  $q = \frac{1-i}{\sqrt{2}}$ ,  $|a_{20}| = ?$

$$\begin{aligned} |a_{20}| &= |a_1 q^{19}| = \left| (1 - i\sqrt{3}) \left( \frac{1-i}{\sqrt{2}} \right)^{19} \right| = |1 - i\sqrt{3}| \cdot \left| \frac{1-i}{\sqrt{2}} \right|^{19} \\ &= \sqrt{1+3} \left( \sqrt{\frac{1}{2} + \frac{1}{2}} \right)^{19} = 2 \cdot 1^{19} = 2. \end{aligned}$$