

**Zadatak 10.** Prikaži u Gaussovoj ravnini sljedeće brojeve:

- 1)  $z = \cos \pi + i \sin \pi$ ;
- 2)  $z = 2 \left( \cos \frac{3\pi}{2} + i \sin \frac{3\pi}{2} \right)$ ;
- 3)  $z = \sqrt{2} \left( \cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right)$ ;
- 4)  $z = \sqrt{5} \left( \cos \frac{7\pi}{6} + i \sin \frac{7\pi}{6} \right)$ ;
- 5)  $z = 3 \left( \cos \frac{11\pi}{3} + i \sin \frac{11\pi}{3} \right)$ .

**Rješenje.**

- 1)  $z_1 = \cos \pi + i \sin \pi = -1$  ;
- 2)  $z_2 = 2 \left( \cos \frac{3\pi}{2} + i \sin \frac{3\pi}{2} \right) = 2(0 + i(-1)) = -2i$  ;
- 3)  $z_3 = \sqrt{2} \left( \cos \frac{3\pi}{4} + i \sin \frac{3\pi}{4} \right) = \sqrt{2} \left( -\frac{\sqrt{2}}{2} + i \frac{\sqrt{2}}{2} \right) = -1 + i$  ;
- 4)  $z_4 = \sqrt{5} \left( \cos \frac{7\pi}{6} + i \sin \frac{7\pi}{6} \right) = \sqrt{5} \left( -\frac{\sqrt{3}}{2} - \frac{1}{2}i \right) = -\frac{\sqrt{15}}{2} - \frac{\sqrt{5}}{2}i$  ;
- 5)  $z_5 = 3 \left( \cos \frac{11\pi}{3} + i \sin \frac{11\pi}{3} \right) = 3 \left( \frac{1}{2} - \frac{\sqrt{3}}{2}i \right) = \frac{3}{2} - \frac{3\sqrt{3}}{2}i$  .