

## In class work 3, Spring 2023

1. Show that 1 is an interior point of the disk  $D[0, 2]$ . (MS)
2. Show that 1 is a boundary point of the circle  $D[0, 2]$  (CR)
3. Show that 1 is an interior point of  $\{z \in \mathbf{C} \mid \operatorname{Re}(z) > 0\}$ . (AK)
4. In the complex plane, sketch a graph of  $|z - 1| = |z + 1|$ . **Hint** think geometrically, not algebraically. You need all complex numbers  $z$  whose distance to 1 is the same as the distance to -1. (DJ)
5. In the complex plane, sketch a graph of  $|z - i| = |z + 1|$ . **Hint** think geometrically, not algebraically. You need all complex numbers  $z$  whose distance to 1 is the same as the distance to -1. (AA)
6. In the complex plane, sketch a graph of  $|z - i| = |z - 1|$ . **Hint** think geometrically, not algebraically. You need all complex numbers  $z$  whose distance to 1 is the same as the distance to -1. (SB)