## Complex numbers in polar form

Recall that the polar form of complex numbers is $r(\cos\theta + i\sin\theta)$ where $r \in \mathbb{R}_+$ and $\theta \in [0, 2\pi)$.

### Exercise 2.8

Compute the following:

a. $(1+i)^{14}$

b. $(1 - \cos\alpha + i\sin\alpha)^n \quad \text{for } \alpha \in [0, 2\pi], n \in \mathbb{N}$

c. $z^n + \dfrac{1}{z^n}$ with $z + \dfrac{1}{z} = \sqrt{3}$