

14. We use Theorem 1.31 (a), and note that 1 is its own conjugate, in the calculation below

$$\begin{aligned}|1 + z|^2 &= (1 + z)(1 + \bar{z}) = 1 + z + \bar{z} + z\bar{z} \\ &= 2 + 2\operatorname{Re}(z).\end{aligned}$$

In the expression above put $-z$ in place of z to get $|1 - z|^2 = 2 - 2\operatorname{Re}(z)$.
Hence

$$|1 + z|^2 + |1 - z|^2 = 4.$$

□