



Bilkent University

Homework # 04
Math 503 Complex Analysis I
Due: 11 December 2020 Friday
Instructor: Ali Sinan Sertöz



Name & Lastname:

Department:

Student ID:

Scan and save your answer as a pdf file and mail it to me before the deadline.

Q-1) Find an infinite product factorization for

$$\cos\left(\frac{\pi z}{4}\right) - \sin\left(\frac{\pi z}{4}\right).$$

Q-2) Show that

$$\frac{\pi}{2} = \prod_{n=1}^{\infty} \frac{(2n)^2}{(2n-1)(2n+1)}.$$