

## MATB24. Quiz #7, TUT #19

(1) (4 point) In each part, give a complete definition, or mathematical characterization of the word in bold.

(a) A **hermitian matrix**

(2) (5 point) Give an example of the described object or explain why such an example does not exist.

(a) A unitary matrix that is not in  $M_{2 \times 2}(\mathbb{R})$

(3) (6 point) Answer the following question:

(a) Find the complex fourth roots of -1.