

Pseudo core invertibility in a certain finite-dimensional *-algebra generated by two projections

By WENDE LI (Nanjing), JIANLONG CHEN (Nanjing) and YUKUN ZHOU (Nanjing)

Abstract. We investigate the existence criterion and formulae of pseudo core inverses of elements in a certain finite-dimensional *-algebra generated by two projections p and q under some prescribed conditions that $(pq)^2 = pq$ and $pqp = \lambda p$ ($\lambda \in \mathbb{F}$), respectively. In addition, we solve a question about Drazin invertibility proposed by Chen *et al.*

WENDE LI
SCHOOL OF MATHEMATICS
SOUTHEAST UNIVERSITY
NANJING 210096
CHINA

JIANLONG CHEN
SCHOOL OF MATHEMATICS
SOUTHEAST UNIVERSITY
NANJING 210096
CHINA

YUKUN ZHOU
SCHOOL OF MATHEMATICS
SOUTHEAST UNIVERSITY
NANJING 210096
CHINA

Mathematics Subject Classification: 15A09.

Key words and phrases: pseudo core inverse, Drazin inverse, projection, *-algebra.