

Name _____

Quiz #2
Mathematics 309a Abstract Algebra
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Let H be the subset $M_2(\mathbb{R})$ consisting of all matrices of the form $\begin{bmatrix} a & -b \\ b & a \end{bmatrix}$

for $a, b \in \mathbb{R}$. Prove:

A. H is closed under matrix addition.

B. H is closed under matrix multiplication.