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Robert Hines* (robert.hines@colorado.edu). *Examples of badly approximable vectors over number fields.* Preliminary report.

We consider approximation of vectors $\mathbf{z} \in F \otimes \mathbb{R} \cong \mathbb{R}^r \times \mathbb{C}^s$ by elements of a number field F and construct examples of badly approximable vectors. These examples come from compact subspaces of $SL_2(\mathcal{O}_F) \backslash SL_2(F \otimes \mathbb{R})$ naturally associated to (totally indefinite, anisotropic) binary quadratic and Hermitian forms, a generalization of the well-known fact that quadratic irrationals are badly approximable over \mathbb{Q} . (Received September 14, 2018)