

# Maximal dimension of vector space

---

*Source:* <http://sci.tech-archive.net/Archive/sci.math/2007-06/msg01561.html>

---

- *From:* Mate <[mmatica@xxxxxxxxxxxx](mailto:mmatica@xxxxxxxxxxxx)>
  - *Date:* Fri, 08 Jun 2007 05:44:14 -0700
- 

For  $n$  a positive integer, let  $V$  be a real vector space containing  $n \times n$  real matrices such that  $\text{trace}(A B) = 0$  for each  $A, B$  in  $V$ . What is the maximal dimension for such a  $V$ ?

Thank you,  
Mate