

Exercises for the talk 02-07

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1. Give a group G , and a pointed G space X such that X , as a (non G) space is a sphere, but as a G space is not a representation sphere, i.e., $X \not\cong S^V$ for any orthogonal real representation V .
2. Let $G = C_2$, $n > 2$, and V be the one dimensional real sign representation. Compute the groups $[S^n, S^n]_G$, $[S^{n+V}, S^{n+V}]_G$, and $[S^{n+2V}, S^{n+2V}]_G$. (hint the answers are \mathbb{Z} , \mathbb{Z}^2 , and \mathbb{Z} , respectively)