

MTH 516/616: Topology II

Homework I

(Due 21/01)

1. Realize the following spaces as Δ -complexes and compute $H_n^\Delta(X)$.

(a) S^n .

(b) $\mathbb{R}P^n$.

(c) The quotient space $[v_0, v_1, v_2]/[v_0, v_1] \sim [v_1, v_2]$.

(d) The quotient space $[v_0, v_1, v_2]/v_0 \sim v_1 \sim v_2$.

(e) The quotient space obtained from Δ^n by identifying all faces of the same dimension.