What can you tell about the reduced homology groups $\tilde{\mathrm{H}}_n(X)$ of X if X is a contractible space?

- We do not yet know how to compute singular homology groups of X. — Run 1: 0% | 0 Number of votes
- $\tilde{\mathrm{H}}_0(X)$ is trivial since X is connected and $\tilde{\mathrm{H}}_1(X)$ is trivial since $\pi_1(X)$ is trivial. That is all we can say. — Run 1: 34% | 13 Number of votes
- They are all trivial. — Run 1: 66% | 25 Number of votes

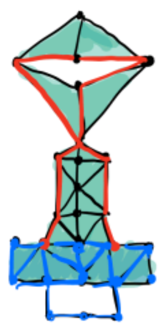
If $f, g : X \to \mathbb{R}^3$ are continuous functions, what can we conclude about $f_*, g_* : \mathrm{H}_n(X) \to \mathrm{H}_n(\mathbb{R}^3)$?

- They are equal. — Run 1: 57% | 23 Number of votes
- They are sometimes equal. — Run 1: 35% | 14 Number of votes
- Nothing. — Run 1: 10% | 4 Number of votes
- I have seen enough algebraic topology. Can we do functional analysis, please? — Run 1: 10% | 4 Number of votes

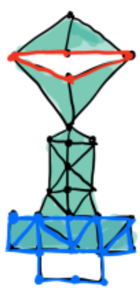
Let $A \subseteq X$ and let A be nonempty. What is the relative homology group $\mathrm{H}_p(X, A)$?

$\mathrm{H}_p(X)/\mathrm{H}_p(A)$.	Run 1	49% | 20 Number of votes
$\tilde{\mathrm{H}}_p(X/A)$.	Run 1	17% | 7 Number of votes
None of the above.	Run 1	37% | 15 Number of votes

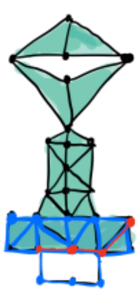
Select all chains drawn in red that represent relative 1-cycles in $S_1(X, A)$, where X is the delta complex depicted in the picture and A a subcomplex drawn in blue (several answers are possible).

- 

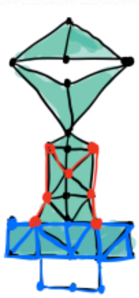
  Run 1 — 78% | 29 Number of votes

- 

  Run 1 — 49% | 18 Number of votes

- 

  Run 1 — 73% | 27 Number of votes

- 

  Run 1 — 89% | 33 Number of votes