Julian Holstein
Rational Homotopy Theory (Master)
Winter Semester 2020/21

Sheet 9

Question 9.1

Use the Mayer-Vietoris exact sequence of Lemma 6.10 to compute cohomology of $A(\partial\Delta[1])$ and $A(\partial\Delta[2])$.

Question 9.2

Let $f : A \to B$ be a map of cdga's with minimal models MA and MB. Show that there is a map $Mf : MA \to MB$ making the obvious diagram commute up to homotopy. Show that Mf is unique up to homotopy.

Question 9.3

Show that C^* preserves colimits.

Question 9.4

Show that the map ϕ_B in Lemma 6.21 is surjective.