A1-00

July 11, 2015

Notes:

1. Stem refers to the geometric total degree $n = t - s$, where t is the internal degree and s is the homological degree (or 'filtration').
2. If a stem is not printed, there are no elements in that stem.
3. The notation s_g refers to generator number g in filtration s.
4. Dashes (–) are used to indicate that an h_i multiplen is beyond the range which has been calculated.

Table 1: Stem 0

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
0	0	0_0			1_0					

Table 2: Stem 3

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
3	1	1_0			2_0					

Table 3: Stem 5

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
5	1	1_1		2_0	2_1					

Table 4: Stem 6

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
6	1	1_2			2_2					
6	2	2_0								

Table 5: Stem 8

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
8	2	2_1								

Table 6: Stem 9

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
9	2	2_2			3_0					

Table 7: Stem 11

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
11	2	2_3		3_0	3_1					

Table 8: Stem 12

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
12	3	3_0								

Table 9: Stem 14

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
14	3	3_1								

Table 10: Stem 15

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
15	3	3_2			4_0					

Table 11: Stem 17

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
17	3	3_3		4_0	4_2					

Table 12: Stem 18

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
18	4	4_0								

Table 13: Stem 20

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
20	4	4_2			5_0	–				
20	4	4_1			5_0	–				

Table 14: Stem 21

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
21	4	4_3			5_1	–				

Table 15: Stem 23

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
23	4	4_4	5_0	5_1	–	–				
23	5	5_0			–	–				

Table 16: Stem 24

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
24	5	5_1		–	–	–				

Table 17: Stem 25

n	s	g	h_0	h_1	h_2	h_3	h_4	h_5	h_6	h_7
25	5	5_2	–	–	–	–				