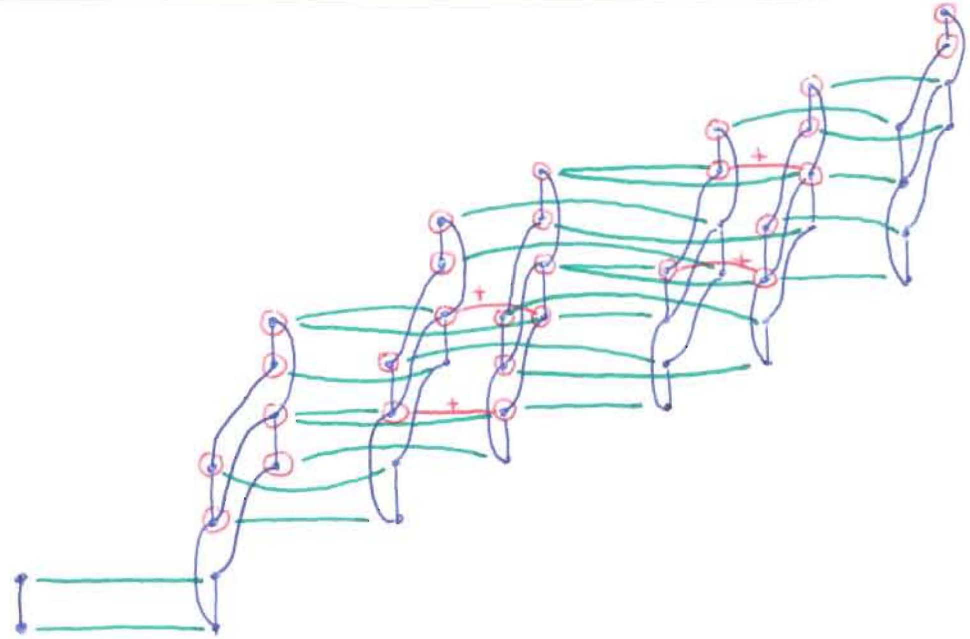
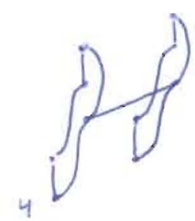
$\mathrm{Ext}_{A(1)}(M(2), \mathbb{F}_2)$

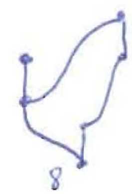


$$M(2) \leftarrow \Sigma^0 A(1) \leftarrow \Sigma^2 A(1) \oplus \Sigma^3 A(1) \longleftarrow \Sigma^4 A(1) \oplus \Sigma^5 A(1) \longleftarrow \Sigma^7 A(1) \leftarrow \Sigma^{12} A(1) \leftarrow$$

ker = 

ker = 

ker = 

ker = 

ker = 

repeats

Hom complex : $\mathbb{F}_2 \longrightarrow \mathbb{F}_2 \oplus \mathbb{F}_2 \longrightarrow \mathbb{F}_2 \oplus \mathbb{F}_2 \longrightarrow \mathbb{F}_2 \longrightarrow \mathbb{F}_2 \longrightarrow .$

t (degree) 0 2 3 4 5 7 12

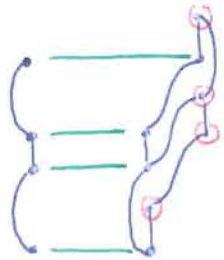
Thus $\mathrm{Ext}^{s,t}_{A(1)}(M(2), \mathbb{F}_2) = \mathbb{F}_2$ iff $s \bmod 4 =$ and $t =$

s mod 4 =	t =
0	$3s$
1	$3s-1$ or $3s$
2	$3s-2$ or $3s-1$
3	$3s-2$

Observe that $A(1) \otimes_{A(0)} \mathbb{F}_2$:  since $Sq^1 = 0$

$\mathrm{Ext}_{A(1)}\left(A(1) \otimes_{A(0)} \mathbb{F}_2 \right)$

Then



ker =  $= \Sigma A(1) \otimes_{A(0)} \mathbb{F}_2$ so the sequence repeats after the first step.

$$A(1) \otimes_{A(0)} \mathbb{F}_2 \leftarrow A(1) \longleftarrow \Sigma A(1) \longleftarrow \Sigma^2 A(1) \leftarrow \cdots$$

Hom complex	$\mathbb{F}_2 \longleftarrow$	$\mathbb{F}_2 \longleftarrow$	$\mathbb{F}_2 \leftarrow \cdots$
t (degree)	0	1	2

so $$\mathrm{Ext}^{s,t}_{A(1)}\left(A(1) \otimes_{A(0)} \mathbb{F}_2 , \mathbb{F}_2 \right) = \begin{cases} \mathbb{F}_2 & \text{if } s = t \\ 0 & \text{else} \end{cases}$$