

page 97, line -5 to page 98, line 2

The formula discussed on these lines is

$$\langle \delta\alpha, y \rangle = \langle \alpha, \partial y \rangle$$

where all coefficients are in the field  $\mathbb{F}$ , with

$$\alpha \in H^{p-1}(A) \quad \delta: H^{p-1}(A) \rightarrow H^p(X, A)$$

$$y \in H_p(X, A) \quad \partial: H_p(X, A) \rightarrow H_{p-1}(A)$$

and  $\langle , \rangle =$  Kronecker index.

To verify this equation, use the definitions in terms of representative cycles and cocycles. Represent

$y$  by  $c \in S_p(X)$  such that  $dc \in S_{p-1}(A)$ , and

$\alpha$  by  $g \in S^{p-1}(X)$  such that  $\delta g = g \circ d|_{S_p(A)} = 0$ .

(Note that  $S^{p-1}(X) \xrightarrow{\text{onto}} S^{p-1}(A)$ , so every cocycle on  $A$

comes from a cochain on  $X$ ). By definition,  $\langle \alpha, \partial y \rangle$

is then equal to  $g(dc) = g \circ d(c) = \delta g(c)$ , which

is equal to  $\langle \delta\alpha, y \rangle$ .