$\therefore \quad \mathrm{Tor}_{A_R}(R, R) = H(B \otimes_{A_R} R)$

$= B \otimes_{A_R} R = \Gamma(t) \otimes E(w)$

as algebras.

Let $R = \mathbb{Z}$: then $t^i = i!\,\gamma_i$, $\Delta(t)$

$$\Delta(\gamma_i) = \frac{1}{i!}\left[\Delta(t)\right]^i = \frac{1}{i!}\sum_{\alpha+\beta=i}$$

$$A_R = P_R^* \Longrightarrow$$

$$\mathrm{Cotor}^{P_R}(\mathbb{Z}/p, \mathbb{Z}/p) =$$

$$\left[\mathrm{Tor}^{A_R}(\mathbb{Z}/p, \mathbb{Z}/p)\right]^* =$$

$$\cancel{E(w)^* \otimes}$$

$$\Gamma(t)^* \otimes E(w)^* =$$

$$P(t^*) \otimes E(w^*) \text{ as HA!}$$

$t^* : |t| = 2p^{n+1}n - 2, \quad w^* = 2p^n n - 1.$