

$${}^X H_{\mathbb{Z}}^{\sharp} = \sum_i^{0|n} {}^X H_{\mathbb{Z}}^i$$

$${}^X {}_t H_{\mathbb{Z}}^{\sharp} = \sum_i^{0|n} t^i \dim {}^X H_{\mathbb{Z}}^i$$

$${}^{X \times Y} {}_t H_{\mathbb{Z}}^{\sharp} = {}^X {}_t H_{\mathbb{Z}}^{\sharp} {}^Y {}_t H_{\mathbb{Z}}^{\sharp}$$

$${}^{X \sqcup Y} {}_t H_{\mathbb{Z}}^{\sharp} = {}^X {}_t H_{\mathbb{Z}}^{\sharp} - {}^Y {}_t H_{\mathbb{Z}}^{\sharp}$$

$$\cup_{\sigma} O_{\sigma} H_{\mathbb{Z}}^{\sharp} = \sum_{\sigma} O_{\sigma} {}_t H_{\mathbb{Z}}^{\sharp}$$

$${}^X {}_{-1} H_{\mathbb{Z}}^{\sharp} = \sum_i^{0|n} (-1)^i \dim {}^X H_{\mathbb{Z}}^i$$