Def An <u>even periodic</u> cohomology theory is a multiplicative cohomology theory with

$$E^n(*) = \begin{cases} \beta^k E^0(*) & n = 2k \\ 0 & n \text{ is odd} \end{cases}$$

with $\beta \in E^2(*)$ invertible.

Atiyah-Hirzebruch Spectral Sequence:

$$H^p(X, E^q(*)) \Longrightarrow E^{p+q}(X)$$

If E is even periodic,

$$E(\mathbb{C}P^\infty) = E(*)[[t]]$$

The power series $f(x,y) = x+y+xy$ satisfies

$$f(x,y) = f(y,x) \qquad f(f(x,y),z) = f(x,f(y,z)) \qquad f(x,0) = x$$

this is "the formal multiplicative group"