TENSOR CATEGORIES. PROJECTS.

Here are some open ended problems to think about. Any progress is interesting!

1. Make some computations of cohomology (or abelian cohomology) in degree 3 for semigroups.

2. We have a very nice description of associators for cyclic groups (see notes by Agustina). Is there something similar for other groups? For starters see some results in this direction for (infinite) free abelian groups in Exercise 4.10 of Kashiwara-Schapira book.

3. Try to study all the structures of based ring on the ring $\mathbb{Z}[x]$ (feel free to add some extra assumptions).