

ARITHMETIC OF MODULI SPACES

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I will briefly explain the famous story of the Weil conjectures relating arithmetic (zeta functions) and topology (cohomology). For additional motivation, I will describe several results using them to compute the cohomology of moduli spaces via counting arguments. Then, I will discuss how much of the story carries over when we replace cohomology with constructions motivated by string theory (Chen-Ruan cohomology).