

## Around Tokuyama’s formula

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Tokuyama’s formula offers a link between combinatorics and representation theory. Namely, it interprets an expression involving the characters of general linear groups as being a sum over one of three combinatorial objects: Gelfand-Tsetlin patterns, shifted tableaux, or gamma ice models. We first review existing literature concerning Tokuyama’s formula and then present two novel proofs which avoid complicated machinery required by previous proofs. We have described progress in extending our results toward an analogous combinatorial identity for the characters of symplectic groups.