1. Record Nr.   UNINA9910824301203321

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   Titolo   Weyl group multiple Dirichlet / / Ben Brubaker, Daniel Bump, and
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   Pubbl/distr/stampa   Princeton, N.J., : Princeton University Press, c2011

   ISBN   1-283-01338-X
                        9786613013385
                        1-4008-3899-1

   Edizione   [Course Book]

   Descrizione fisica   1 online resource (173 p.)

   Collana   Annals of mathematics studies ; ; no. 175

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   Disciplina   515/.243

   Soggetti   Dirichlet series
                        Weyl groups

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Note generali   Description based upon print version of record.

   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   Front matter -- Contents -- Preface -- Chapter One. Type A Weyl
                        Group Multiple Dirichlet Series -- Chapter Two. Crystals and Gelfand-
                        Tsetlin Patterns -- Chapter Three. Duality -- Chapter Four. Whittaker
                        Functions -- Chapter Five. Tokuyama's Theorem -- Chapter Six.
                        Outline of the Proof -- Chapter Seven. Statement B Implies Statement A
                        -- Chapter Eight. Cartoons -- Chapter Nine. Snakes -- Chapter Ten.
                        Noncritical Resonances -- Chapter Eleven. Types -- Chapter Twelve.
                        Knowability -- Chapter Thirteen. The Reduction to Statement D --
                        Chapter Fourteen. Statement E Implies Statement D -- Chapter Fifteen.
                        Evaluation of and , and Statement G -- Chapter Sixteen.
                        Concurrence -- Chapter Seventeen. Conclusion of the Proof -- Chapter
                        Eighteen. Statement B and Crystal Graphs -- Chapter Nineteen.
                        Statement B and the Yang-Baxter Equation -- Chapter Twenty. Crystals
                        and p-adic Integration -- Bibliography -- Notation -- Index

   Sommario/riassunto   Weyl group multiple Dirichlet series are generalizations of the Riemann
                        zeta function. Like the Riemann zeta function, they are Dirichlet series
                        with analytic continuation and functional equations, having applications
                        to analytic number theory. By contrast, these Weyl group multiple
                        Dirichlet series may be functions of several complex variables and their

groups of functional equations may be arbitrary finite Weyl groups. Furthermore, their coefficients are multiplicative up to roots of unity, generalizing the notion of Euler products. This book proves foundational results about these series and develops their combinatorics. These interesting functions may be described as Whittaker coefficients of Eisenstein series on metaplectic groups, but this characterization doesn't readily lead to an explicit description of the coefficients. The coefficients may be expressed as sums over Kashiwara crystals, which are combinatorial analogs of characters of irreducible representations of Lie groups. For Cartan Type A, there are two distinguished descriptions, and if these are known to be equal, the analytic properties of the Dirichlet series follow. Proving the equality of the two combinatorial definitions of the Weyl group multiple Dirichlet series requires the comparison of two sums of products of Gauss sums over lattice points in polytopes. Through a series of surprising combinatorial reductions, this is accomplished. The book includes expository material about crystals, deformations of the Weyl character formula, and the Yang-Baxter equation.