



Mathematics and Music

David Wright, *Washington University,
St. Louis, MO*

This introduction to the interrelationships between mathematical reasoning and musical creativity shows how both subjects appeal to the same set of skills and instincts. The text explores the common foundations of the two subjects, which are developed side by side. The use of musical topics allows for the introduction of important mathematical concepts such as modular arithmetic and equivalence relations to early undergraduates.

Mathematical World, Volume 28; 2009; 161 pages; Softcover;
ISBN: 978-0-8218-4873-9; List US\$35; AMS members US\$28;
Order code MAWRD/28

Table of Contents

- * Basic mathematical and musical concepts
- * Horizontal structure
- * Harmony and related numerology
- * Ratios and musical intervals
- * Logarithms and musical intervals
- * Chromatic scales
- * Octave identification and modular arithmetic
- * Algebraic properties of the integers
- * The integers as intervals
- * Timbre and periodic functions
- * The rational numbers as musical intervals
- * Tuning the scale to obtain rational intervals
- * Bibliography
- * Index

1-800-321-4AMS (4267), in the U. S. and Canada,
or 1-401-455-4000 (worldwide); fax: 1-401-455-4046;
email: cust-serv@ams.org.

www.ams.org/bookstore

