Calculations for Molecular Biology and Biotechnology, Second Edition: A Guide to Mathematics in the Laboratory

Frank H. Stephenson
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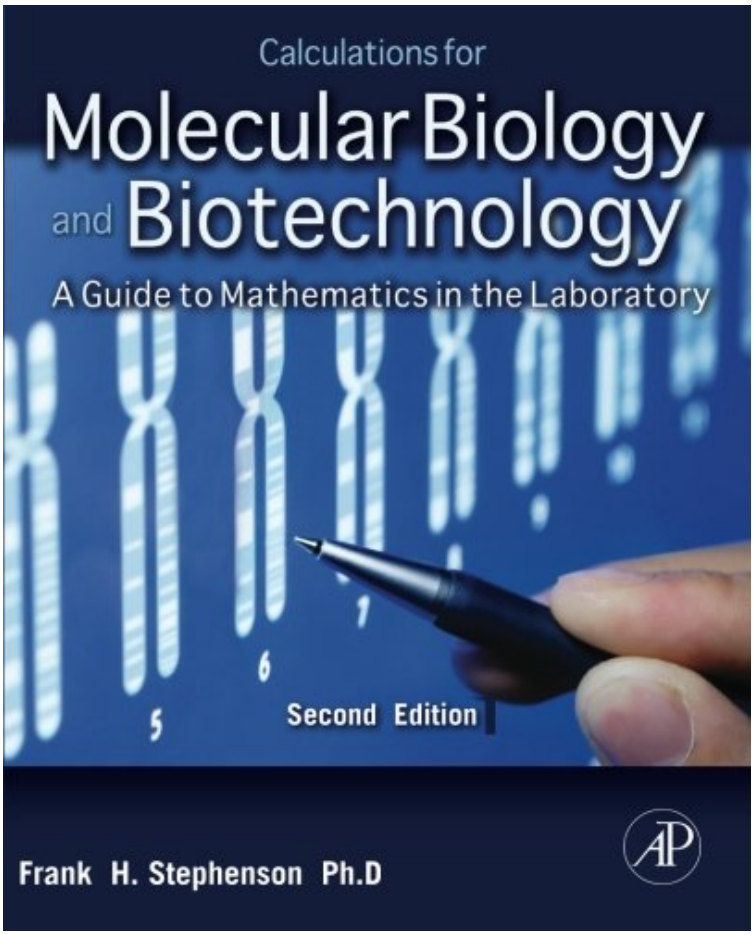

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needed this book for a cellular and molecular biology laboratory class I was enrolled in, this book makes the math really simple and easy to follow.0 of 0 people found the following review helpful. Five StarsBy Terrye L. LightGood manual for the lab. Lots of good information/formula at your fingertips.

Calculations for Molecular Biology and Biotechnology: A Guide to Mathematics in the Laboratory, Second Edition, provides an introduction to the myriad of laboratory calculations used in molecular biology and biotechnology. The book begins by discussing the use of scientific notation and metric prefixes, which require the use of exponents and an understanding of significant digits. It explains the mathematics involved in making solutions; the characteristics of cell growth; the multiplicity of infection; and the quantification of nucleic acids. It includes chapters that deal with the mathematics involved in the use of radioisotopes in nucleic acid research; the synthesis of oligonucleotides; the polymerase chain reaction (PCR) method; and the development of recombinant DNA technology. Protein quantification and the assessment of protein activity are also discussed, along with the centrifugation method and applications of PCR in forensics and paternity testing.Topics range from basic scientific notations to complex subjects like nucleic acid chemistry and recombinant DNA technologyEach chapter includes a brief explanation of the concept and covers necessary definitions, theory and rationale for each type of calculationRecent applications of the procedures and computations in clinical, academic, industrial and basic research laboratories are cited throughout the text New to this Edition: Updated and increased coverage of real time PCR and the mathematics used to measure gene expressionMore sample problems in every chapter for readers to practice concepts

About the AuthorFrank Stephenson received his doctorate in molecular biology from UC Berkeley and has published several books in the field including 'DNA: How the Biotech Revolution is Changing the Way We Fight Disease' and 'A Hands-On Introduction to Forensic Science: Cracking the Case'. He is currently an instructor in the Technical Training Department with ThermoFisher Scientific, the worlds leading manufacturer of instrumentation and reagents for the biotechnology industry.