



Exploding Digits: Amazing Patterns in Decimal Fractions (Paperback)

By William B Martin

Createspace Independent Publishing Platform, 2016. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****.As decimals, all fractions either terminate or repeat a pattern of digits forever. This book focuses on the pattern of the repeating digits. Fractions can have one, two or any number of repeating digits. For example, $3/7$ has the six-digit pattern repeating forever. Other fractions have patterns that are too long for the pattern to be seen even on a good calculator. Enter $5/23$ on a calculator. It has a 22 digit long pattern which repeats forever, an explosion of digits! Some fractions have repeating decimals that start repeating immediately after the decimal point, and some start repeating later. What causes these different behaviors? Groups of fractions with the same denominator, such as $1/13, 2/13, 3/13, \dots, 12/13$ are discussed. A beautiful pattern of closely related expansions are seen. In fact we show how to make clocks which organize these 12 fractions. The book explains that just one theorem from number theory has consequences that explain all these expansions.



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Reviews

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I actually started out reading this book. It can be packed with wisdom and knowledge I discovered this ebook from my dad and i suggested this book to understand.

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