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Benford's law – using logarithms to detect fraud.

Ohio J. Sch. Math. 2012, No. 65, 52-57 (2012).

Summary: In 1881, Simon Newcomb made the simple observation that the beginning pages of books were more worn than the later pages of those books. From that routine observation, Newcomb and others developed a mathematical principle involving logarithms that can be observed in a wide variety of data, from birth and death rates, to lengths of rivers, to financial transactions. In this article, the author provides an example of how this principle can be used to detect fraud in a company's accounts payable department. Suggestions for classroom activities are provided for additional exploration.

Classification: M90 K60

Keywords: Benford's law; logarithms; distributions; applications