

ZMATH 2015d.00520

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A classroom note on: some fast alternatives to division.

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From the introduction: Most students are aware of the fact that a number N is divisible by nine exactly when the sum of the digits of N is a multiple of nine. This fact gives a shortcut that allows one to determine if nine is a divisor of N without performing a division (for large numbers it may be necessary to apply this fact more than once). Far fewer students know that a similar shortcut applies to the number eleven. In this note we will consider various shortcuts that can be used to determine if a given value divides a number N . In most cases these techniques are significantly faster than division. For completeness this note will include some techniques that are fairly “obvious”, but others of these shortcuts should be new to most students. This number analysis may be of interest to college mathematics groups or motivated liberal arts students.

Classification: F30 F60

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