111 divided by 3

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According to V. I. Arnold [1], everybody should be able to divide 111 by 3 without a calculator. In October 2000, the present authors conducted a test with the students of mathematics in two small universities in the US and Russia (Mount Holyoke College, Mass. and University of Pereslavl, Pereslavl-Zalessky). We announced that we were going to have a public opinion poll. Every student was given a folded piece of paper with the question "111 : 3 = " and asked to write the answer in secret from the others.

Results follow.

University /Teacher	Course /Year	No. of Stdnts	Number of Answers: Corr/Blank/Wrong	All Wrong Answers
Mt. Holyoke S. Chmutov	"Linear algebra" 2, 3, 4 years	24	22/0/2	$111 : 3 = 33\frac{2}{3}$; $111 : 3 = 21$.
Mt. Holyoke S. Chmutov	"Calculus 1" 1st year	9	7/0/2	$111 : 3 = 2.\overline{702}$ (periodic decimal); $111 : 3 = 3\frac{2l}{3}$.
Pereslavl S. Duzhin	"General algebra" 3rd year	16	10/2/4	$111 : 3 = 1$; $111 : 3 = 3\frac{2}{99}$; $111 : 3 = 33.61$; $111 : 3 = 111n : 3n$, where $n \in \mathbb{Z}$.
Pereslavl S. Duzhin	"Computational Geometry" 4th year	11	9/2/0	

Remarks.

1. The answer $111n : 3n$, where $n \in \mathbb{Z}$, is consonant with the famous Arnold's story [1] about the French boy who was asked to add 2 and 3 (his answer was "2+3=3+2, because addition is commutative").

2. A probable reason why letter 'l' appeared in one of the answers: the student mistook the last '1' of 111 for 'l' because of teacher's handwriting.

The table shows that typical American students know mathematics a little better than their Russian counterparts.

References.

[1] "Californian wars in Dubna". V. I. Arnold interviewed by E. Kokurina. — "Obshchaya gazeta", no. 38, September 21, 2000 (in Russian). Text and PostScript files available at `http://www.botik.ru/as/arnold/arn-papers.html`.