## Hand calculation, reciprocal of 499

When you look at the reciprocal of 499 which s a very interesting number just one unite under 500 the repeating digts also have some note worthy series of digts. Starting from digit position 1; 002 004 008 016 032 064 128 256; note how the numbers double from one group to the next. Then starting from digit position 338; 88 777 555 11 022 044 088; two or three digits in a row especial the last four groups double from one to the next. These are two groups of very interesting digts sequences

William Shanks s one of several men who dd the hand calculation of the reciprocal of 499. In Williams PI calculation he had to do the term for  $(1/5)^{499/499}$  which has 348 leading 0's which does not count, followed by 151 digits for the power of 2 which also does not count, which leaves last 210 trailing 0's for some of the digits from the 498 digits of the reciprocal of 499. As it turns out the starting point of this number is from the fourth digit on as you can see he did 210 of the total 498 not the complete 498 for the total number of required digits. William Shanks had to do all the reciprocal of all the odd numbers up to 1009.

The last person to calculate the number  $\gamma$  0.5772156649 was J. C. Adams on December 6, 1877 he published 264 and 265 digits say he calculated 270 digits that still fall short of the 498 required digits J. C. Adams had to do all the reciprocal of all the numbers up to 1000.

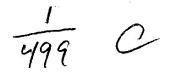
On the next 17 pages have the hand calculation for he reciprocal of 499 which I have done for the fun of it. Since there seams to be no other person who has done the complete calculation this is the first time it has been done. A computer program does not create this detailed level of calculation.

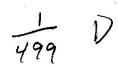
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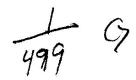
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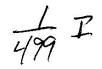
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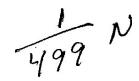
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