Secret Trick: Math Division Long

Welcome to another, 5 minute faster math class of glad2teach. My question to you this time is very simple, can you mentally divide 221013 by 9 in 6 seconds? Well I know that you can so please give it a try your time starts now. (pause of 6 seconds) Your time is up. The correct answer would be 24557. Let's check it out, yes 24557. So could you get it? I'm sure you must have got the first three to four digits of this answer. Did you? Quit as you did or even if you could not get the first digit of this answer right. Not to worry, for the next three minutes you'd have learned to divide even bigger number than what I've given you with 9 in 6 seconds. The faster way to divide any number by 9, is that, that you copy the first digit of the divided as it is and you have the first answer digit. The next one would be this answer digit (pointing to the first 2) plus the next digit of the divided (pointing to the second 2). So, 2 plus 2 is 4, the next answer would be 4 plus 1 that is 5. Now using the same logic, using the next number digit 5 plus 0, which is again 5. The next one would be 5 plus 1 that is 6 and then the last one would be 6 plus 3 that is 9. But you do not write 9 here (pointing to area next to 6) you write it here (pointing under the ÷ symbol) because this would be the remainder; if there is a remainder. In this case there will be none. Why? Because 9 still goes 1 times into 9. So, 9 times 1 is nine and you have the answer. The answer 24557, I'll write it here, 24557! So this way we reduced this complex division to very simple addition. I'd very sure your very good at adding numbers aren't you?

Let's find out. So, let's quickly take one more example. Take any number it does not matter if the number is perfectly divisible by 9 or not. You can give me some numbers. Let's take 3…anything…2, 1, 4, 2…okay and you divide it by 9. Give it a try. (pause for 6 seconds) So the answer would be 3…3 plus 2 that is 5…5 plus 5 that is 6…6 plus 4 that is 10. Now 10 is a two digit number so carry forward 1, write 0 here and 10 plus 2, the last digit would be 12. So you write 12 here (pointing under the ÷ symbol). Now 9 goes how many times in 12? 9, 1 times is 9 and 3 is the remainder…isn't it? So this number (pointing to the 3 written over the 12) was not perfectly divisible by 9 so you get the remainder 3 and this is your answer. The answer would be 3571, that's it. And it's not like that this method is restricted to division with 9. Not at all, you can divide with 8, you can divide with 7, and you can divide with any two digit divisor. It does not make any difference, like…let's say, what does this number (pointing to 2104) divided by 8? Since this 8 is two less than the base 10, isn't it?