Playing with Pascal

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Abstract

I focused on using Pascal's Triangle to solve exponents of two digit numbers. The method I used is also used in the pattern of the powers of 11. I took that algorithm and applied it to other two digit numbers. Accordingly I used 12² for one of my examples. The answer to this is 144. Now if we were to expand the number 12 using Pascal's triangle your result would be: 1 4 4, which was the result when 12² is calculated. I repeated the process with several numbers and higher powers and discovered that the higher the power the more necessary it becomes to carry numbers over. I came to the conclusion that expanding a two digit number using Pascal's Triangle will provide the same result if one was to perform the operation with a calculator. Coming into this investigation, I believed that this process would not work with the multiples of ten; however after further testing and experimentation, the powers of the multiples of ten do actually work.