Can a mathematical formula be patented?

An example of a mathematical formula is $x^2 - x + 41$ where x is a variable. All this means is that the letter x can represent many different values. For example, substitute $x = 0$ into the previous formula and obtain 41 as an answer. Such number is a prime and for the first forty values of x this formula generates primes. What is a patent? A patent is a new and useful invention. Unfortunately, mathematical formulas cannot be patented. In fact, any mathematical formula is useless unless it can be applied to something practical. Yet, if you think that you have found a new mathematical formula which may be of general interest, my advice, is first to look it up in the Internet and see if you get any results from your search. How do you do this? Open your browser and type www.google.com . Do not copy and paste your formula there but instead type it (without any spaces) as $x\text{^}2 - x + 41$ and check that what you see in the screen is exactly the formula that you have entered. For example, if you have typed the above formula correctly then the first result from your search should be **Prime-Generating Polynomial from Wolfram MathWorld** and if such is so then click on this link. In my opinion, MathWorld is one of the best websites for mathematical resources. It has been created, developed and nurtured by Eric W. Weisstein at Wolfram Research. Now, try what we have just done with your formula! If what you have entered does not appear among the first ten results from your Google search, I suggest another alternative.

What number do you get if you replace by zero all the variables in your formula? For example, in the above formula the number is 41. And for $x = 1$, the resulting number is also 41 while for $x = 2$, we get 43. For $x = 3$, the answer is 47 and $x = 4$, it is 53. Therefore, for the first five integers the above formula results in the sequence $41, 41, 43, 47$ and 53. Now, I will present another very interesting website. It is the on-line encyclopedia of integer sequences or OEIS for short. This large database of integer sequences was initiated by Neil J. A. Sloane back in 1964 and continues to add new sequences almost everyday. Type www.oeis.org and enter our sequence as $41, 41, 43, 47, 53$ in the space provided. If you scroll down to the third result or sequence number $A142719$ you will immediately recognize the above formula. Please notice that the numbers we have entered appear in bold. All the other successive numbers correspond to $x = 5$, $x = 6$, $x = 7$ and so on. At this point, repeat the previous steps with your formula. After doing all necessary calculations, you should have a total of five numbers. Enter your sequence into the database and see what you get. If the sequence is already known then you should see a sequence number like the one above. Otherwise, you will get the following reply: "**Sorry, but the terms do not match anything in the table. If your sequence is of general interest, please submit it using the form provided and it will (probably) be added to the OEIS! Include a brief description and if possible enough terms to fill 3 lines on the screen. We need at least 4 terms.**" which means that most likely the sequence you have entered is new. In order to confirm this you must fill the form provided and submit it. If your sequence is accepted, you will receive a confirmation email from OEIS. Soon after, you will able to see your name and your sequence appear in the database among the other contributions. In conclusion, although your mathematical formula was not patented, you were able to publish it forever inside a scientific database which is daily accessed by many individuals who do research. What better way is there to advance than to share your knowledge with others? If you have any questions, please contact me.

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