Prime Recognition

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Teacher
Basic to Advanced classes

To find whether a given number (x) is a prime or composite in 3 steps.

Step 1: Perform \(1 \div x\). Count the number of recurring digits (rd).
If \(rd = x - 1\), the number is prime.
If not, go to step 2.

Step 2: Perform \([T] = \lfloor 9999999 \ldots \times 9 \rfloor \div \lfloor 1 \div x \times 10^{(x - 1)} \rfloor\)
If \([T]\) is not equal to \(x\), the number is composite.
If \([T] = x\), go to step 3.

Step 3: Perform \(x \div (rd + 1)\)
If remainder = 0 then it is not a prime.
If remainder is not equal to zero, it is a prime.

Thank you. Bholenath.

-Rishi Tuteja