

I've formulated actual algorithms that compute the so-called hyperbasveo functions. Their "definitions" can be found here: <http://www.topix.net/forum/science/mathematics/TQO3VIEVJSF8IKTOE>

Note that there is a problem with his definition - you can't define n as an input parameter, and then say "for n = 1...10." Either it's a parameter or it isn't. I've gone ahead and substituted nmax instead of n.

```
In[1]:= Basveo[b_, nmax_, a_] := Module[{k, n, list},
  list = Range[nmax];
  For[n = 1, n ≤ 10, n++,
    k = Mod[n, b];
    If[Mod[k, 2] ≠ 0, list[[n]] = n + a];
  ];
  list
]
```

```
In[2]:= Basveo[3, 10, 10]
```

```
Out[2]= {11, 2, 3, 14, 5, 6, 17, 8, 9, 20}
```

Notice that there is exactly one minor difference between Basveo and openBasveo, where the modulus m is substituted for the modulus 2.

```
OpenBasveo[m_, b_, nmax_, a_] := Module[{k, list},
  list = Range[nmax];
  For[n = 1, n ≤ 10, n++,
    k = Mod[n, b];
    If[Mod[k, m] ≠ 0, list[[n]] = n + a];
  ];
  list
]
```

```
In[5]:= OpenBasveo[2, 10, 10, 10]
```

```
OpenBasveo[3, 9, 10, 5]
```

```
Out[5]= {11, 2, 13, 4, 15, 6, 17, 8, 19, 10}
```

```
Out[6]= {6, 7, 3, 9, 10, 6, 12, 13, 9, 15}
```

Notice that here we just change the bounds on n. For that reason, nmax is no longer a parameter:

```
In[18]:= HyperBasveo[s_, t_, m_, b_, a_] := Module[{n, k, list},
  list = Range[s, t];
  For[n = s, n ≤ t, n++,
    k = Mod[n, b];
    If[Mod[k, m] ≠ 0, list[[n - s + 1]] = n + a];
  ];
  list
]
```

```

In[23]:= HyperBasveo[1, 10, 2, 10, 10]
          HyperBasveo[1, 10, 3, 9, 5]
          HyperBasveo[3, 8, 2, 7, 8]

Out[23]= {11, 2, 13, 4, 15, 6, 17, 8, 19, 10}

Out[24]= {6, 7, 3, 9, 10, 6, 12, 13, 9, 15}

Out[25]= {11, 4, 13, 6, 7, 16}

```

Now he asks us to set:

```
function(n)= HyperBasveo(n+1,1,n+1,i,n+1,n+ 1) - PrimeNumber(Nth)
```

Which actually wants the  $n + 1^{\text{st}}$  element of one of our properly-written HyperBasveo functions. He has substituted his counter  $i$  instead of  $n$  because  $n$  has been reused. We discard that undefined (and irrelevant) "parameter."

```

In[48]:= f1[n_] := HyperBasveo[1, n + 1, n + 1, n + 1, n + 1];
          f2[n_] := f1[n][[n + 1]]
          f[n_] := f2[n] - Prime[n]

In[51]:= Table[f1[n], {n, 1, 10}] // TableForm
          Table[f2[n], {n, 1, 10}]
          Table[f[n], {n, 1, 10}]

```

```

Out[51]//TableForm=
  3      2
  4      5      3
  5      6      7      4
  6      7      8      9      5
  7      8      9      10      11      6
  8      9      10      11      12      13      7
  9      10      11      12      13      14      15      8
  10     11      12      13      14      15      16      17      9
  11     12      13      14      15      16      17      18      19      10
  12     13      14      15      16      17      18      19      20      21      11

```

```
Out[52]= {2, 3, 4, 5, 6, 7, 8, 9, 10, 11}
```

```
Out[53]= {0, 0, -1, -2, -5, -6, -9, -10, -13, -18}
```

It appears that none of this is very meaningful.