

```

nn=Range[1,10000000]
n=Select[nn,PrimeQ,(2500)]
n2=Select[nn,IntegerQ,(500)]
k=(n^2)-1+(n)+(2-4n)
d=n^4-1+n^2
c=n^3+2
e=Mod[c,3]
f=Mod[d,3]
g=Mod[k,3]
h=Mod[c,7]
i=Mod[d,7]
j=Mod[k,7]
l=Mod[c,4]
m=Mod[d,4]
o=Mod[k,4]
r=Mod[c,5]
s=Mod[d,5]
t=Mod[k,5]
QQ=Transpose[{e,f,g,h,i,j,l,m,o,r,s,t}]
n2=7919
k1=(n2^2)-1+(n2)+(2-4n2)
d1=n2^4-1+n2^2
c1=n2^3+2
e1=Mod[c1,3]
f1=Mod[d1,3]
g1=Mod[k1,3]
h1=Mod[c1,7]
i1=Mod[d1,7]
j1=Mod[k1,7]
l1=Mod[c1,4]
m1=Mod[d1,4]

```

```

o1=Mod[k1,4]
r1=Mod[c1,5]
s1=Mod[d1,5]
t1=Mod[k1,5]
QQ=Transpose[{e,f,g,h,i,j,l,m,o,r,s,t}]
a={e1,f1,g1,h1,i1,j1,l1,m1,o1,r1,s1,t1}
existeSublista = MemberQ[QQ,a]
fui=Position[QQ,a]
n2=Select[nn,IntegerQ,(7919)]
k1=(n2^2)-1+(n2)+(2-4n2)
d1=n2^4-1+n2^2
c1=n2^3+2
e1=Mod[c1,3]
f1=Mod[d1,3]
g1=Mod[k1,3]
h1=Mod[c1,7]
i1=Mod[d1,7]
j1=Mod[k1,7]
l1=Mod[c1,4]
m1=Mod[d1,4]
o1=Mod[k1,4]
r1=Mod[c1,5]
s1=Mod[d1,5]
t1=Mod[k1,5]
QQ=Transpose[{e,f,g,h,i,j,l,m,o,r,s,t}]
qq=Transpose[{e1,f1,g1,h1,i1,j1,l1,m1,o1,r1,s1,t1}]
existeSublista = MemberQ[qq,a]
gh=Position[qq,a]
jh=Flatten[gh]
Differences[%]
Length[%]

```

```
bg=PrimeQ[gh]
```

```
AbsoluteTiming[Count[jh, _?PrimeQ]]
```

```
AbsoluteTiming[PrimePi[16931]]
```

```
seq1 = fui
```

```
seq2 = gh
```

```
(* Ajustar seq1 e seq2 para terem o mesmo número de elementos *)
```

```
If[Length[seq1] > Length[seq2],
```

```
seq1 = Take[seq1, Length[seq2]]
```

```
,
```

```
seq2 = Take[seq2, Length[seq1]]
```

```
];
```

```
a = Mod[seq2, seq1];
```

```
a1 = Differences[a];
```

```
b = seq1 - a;
```

```
b1 = Differences[b];
```

```
c = ListLinePlot[Flatten[a1], PlotStyle -> Red];
```

```
d = ListLinePlot[Flatten[b1], PlotStyle -> Blue];
```

```
e = ListLinePlot[Flatten[seq1], PlotStyle -> Green];
```

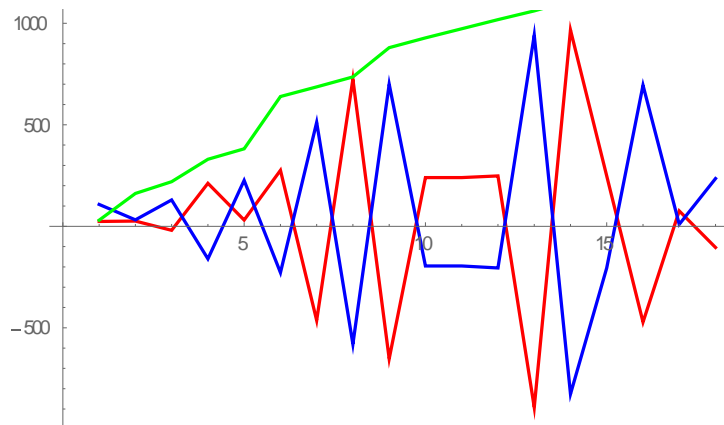
```
Show[c, d, e]
```

```
{9.4*10-6,11}
```

```
{6.*10-7,1953}
```

```
Seq1={{30},{162},{220},{330},{382},{639},{687},{736},{880},{928},{973},{1018}  
,{1061},{1111},{1252},{1295},{1518},{1604},{1735},{1778},{1871},{1912},{1993}  
,{2128},{2161},{2203},{2246},{2330}}
```

```
Seq2={{113},{533},{953},{1373},{1793},{2213},{2633},{3053},{3473},{3893},{43  
13},{4733},{5153},{5573},{5993},{6413},{6833},{7253},{7673}}
```



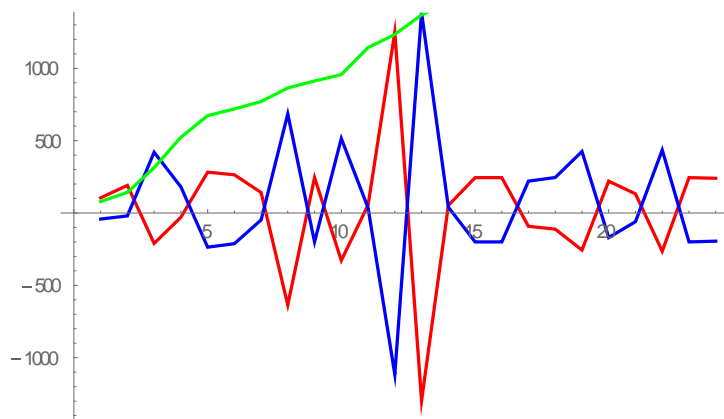
The position of the 11 th prime number of the sequence 2 is the position of the graph that has 2 opposite sides it repeats some times it is the crossing of the graphs in the prime position

{0.0000144,15}

{6.*10⁻⁷,1953}

{{79},{142},{313},{523},{673},{719},{771},{864},{912},{956},{1143},{1234},{1369},{1456},{1548},{1592},{1636},{1764},{1897},{2066},{2116},{2188},{2359},{2403},{2448}}

{{401},{821},{1241},{1661},{2081},{2501},{2921},{3341},{3761},{4181},{4601},{5021},{5441},{5861},{6281},{6701},{7121},{7541},{7961},{8381},{8801},{9221},{9641},{10061},{10481},{10901},{11321},{11741},{12161},{12581},{13001}}

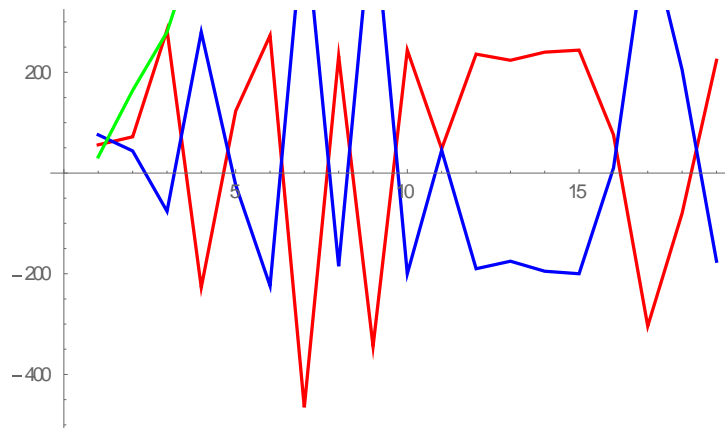


{0.0000113,11}

{1.6*10⁻⁶,1953}

{{32},{164},{280},{488},{541},{640},{689},{738},{785},{976},{1020},{1113},{1159},{1208},{1253},{1297},{1383},{1564},{1689},{1738},{1829},{1873},{1953},{1995},{2084},{2162}}

{{131},{551},{971},{1391},{1811},{2231},{2651},{3071},{3491},{3911},{4331},{4751},{5171},{5591},{6011},{6431},{6851},{7271},{7691},{8111}}



In these examples it has as a pattern the crossing 1 position before