

Pattern of sublists within a list

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seq2 = {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};
(* Defina seq1 como uma variável simbólica *)
Clear[x];
seq1 = Array[x, Length[seq2]];
(* Calcular a diferença entre seq2 e seq1 *)
b = seq2 - seq1;
(* Calcular Mod[seq2, seq1] *)
c = Mod[seq2, seq1];
(* Calcular Mod[b, seq1] *)
d = Mod[b, seq1];
(* Resolver a equação c == d para encontrar os valores de seq1 *)
sol = FindInstance[c == d, seq1];
(* Mostrar os resultados *)
sol
bn=complexValues = sol /. (x_ -> y_) :> y
bb=Flatten[bn]
vb=seq2*bb
ListLinePlot[ReIm@vb, PlotStyle -> Blue, PlotMarkers -> Automatic, GridLines -
>
Automatic]
vb/bb
(* Given values from your solution *)
bn = bb
(* Flatten the solution list to get a single list *)
bb = Flatten[bn];

(* Compute the vb values *)
vb = seq2 * bb;

(* Extract the real and imaginary parts for plotting *)
realPart = Re[vb];
imagPart = Im[vb];

(* Combine the real and imaginary parts into a list of coordinate pairs *)
coordinates = Transpose[{realPart, imagPart}];

(* Print the coordinates *)
ad=coordinates
ad/seq2
```

$\{\{171/10, -(103/5)\}, \{64/5, 1/10\}, \{92/5, 89/5\}, \{69/5, -(1/5)\}, \{17/2, 23/10\}, \{-(181/10), 114/5\}, \{7/2, 43/5\}, \{19/2, -(63/10)\}, \{-(157/10), 207/10\}, \{16/5, -(217/10)\}, \{-(4/5), 79/5\}, \{18/5, 10\}, \{-(35/2), -(23/10)\}, \{213/10, -(49/5)\}, \{-(102/5), 89/10\}, \{-(29/2), -(5/2)\}, \{-(43/10), 77/5\}, \{161/10, -(41/5)\}, \{-18, 39/2\}, \{-10, 79/10\}, \{58/5, -(23/10)\}, \{-(17/5), -6\}, \{-(83/5), -(74/5)\}, \{-(8/5), 7/2\}, \{39/10, 247/10\}, \{11/2, 23\}\}$

Example 1) $2084 * 24.7 = 51474.8$

$420 * 25 + (131/51474.8) = 10500.00254/420 = 25.00000604$

Example 2) $2162 * 23 = 49726$

$420 * 26 + 131/49726 = 10920.00262/420 = 26.00000623$