

> # $P(h+1)-P(h)+1=prime$ by H.E 2019-5-31:

> $c := 0$: **for** h **from** 1 **to** 100 **do** $Pp := ithprime(h+1) - ithprime(h) + 1$:**if** $isprime(Pp)$

then $c := c + 1$: $print\left(ithprime(h+1)[(h+1)th] - ithprime(h)[hth] + 1$

$= Pp\left[prime\left[\frac{cth}{[Tc=h]}\right]\right]$ **fi:od:**

$$3_{2th} - 2_{th} + 1 = 2_{prime} \frac{th}{[Tc=1]}$$

$$5_{3th} - 3_{2th} + 1 = 3_{prime} \frac{2th}{[Tc=2]}$$

$$7_{4th} - 5_{3th} + 1 = 3_{prime} \frac{3th}{[Tc=3]}$$

$$11_{5th} - 7_{4th} + 1 = 5_{prime} \frac{4th}{[Tc=4]}$$

$$13_{6th} - 11_{5th} + 1 = 3_{prime} \frac{5th}{[Tc=5]}$$

$$17_{7th} - 13_{6th} + 1 = 5_{prime} \frac{6th}{[Tc=6]}$$

$$19_{8th} - 17_{7th} + 1 = 3_{prime} \frac{7th}{[Tc=7]}$$

$$23_{9th} - 19_{8th} + 1 = 5_{prime} \frac{8th}{[Tc=8]}$$

$$29_{10th} - 23_{9th} + 1 = 7_{prime} \frac{9th}{[Tc=9]}$$

$$31_{11th} - 29_{10th} + 1 = 3_{prime} \frac{10th}{[Tc=10]}$$

$$37_{12th} - 31_{11th} + 1 = 7_{prime} \frac{11th}{[Tc=11]}$$

$$41_{13th} - 37_{12th} + 1 = 5_{prime} \frac{12th}{[Tc=12]}$$

$$43_{14th} - 41_{13th} + 1 = 3_{prime} \frac{13th}{[Tc=13]}$$

$$47_{15th} - 43_{14th} + 1 = 5_{prime} \frac{14th}{[Tc=14]}$$

$$53_{16th} - 47_{15th} + 1 = 7_{prime} \frac{15th}{[Tc=15]}$$

$$59_{17th} - 53_{16th} + 1 = 7_{prime} \frac{16th}{[Tc=16]}$$

$$61_{18\text{th}} - 59_{17\text{th}} + 1 = 3_{\text{prime}} \frac{17\text{th}}{[Tc=17]}$$

$$67_{19\text{th}} - 61_{18\text{th}} + 1 = 7_{\text{prime}} \frac{18\text{th}}{[Tc=18]}$$

$$71_{20\text{th}} - 67_{19\text{th}} + 1 = 5_{\text{prime}} \frac{19\text{th}}{[Tc=19]}$$

$$73_{21\text{th}} - 71_{20\text{th}} + 1 = 3_{\text{prime}} \frac{20\text{th}}{[Tc=20]}$$

$$79_{22\text{th}} - 73_{21\text{th}} + 1 = 7_{\text{prime}} \frac{21\text{th}}{[Tc=21]}$$

$$83_{23\text{th}} - 79_{22\text{th}} + 1 = 5_{\text{prime}} \frac{22\text{th}}{[Tc=22]}$$

$$89_{24\text{th}} - 83_{23\text{th}} + 1 = 7_{\text{prime}} \frac{23\text{th}}{[Tc=23]}$$

$$101_{26\text{th}} - 97_{25\text{th}} + 1 = 5_{\text{prime}} \frac{24\text{th}}{[Tc=25]}$$

$$103_{27\text{th}} - 101_{26\text{th}} + 1 = 3_{\text{prime}} \frac{25\text{th}}{[Tc=26]}$$

$$107_{28\text{th}} - 103_{27\text{th}} + 1 = 5_{\text{prime}} \frac{26\text{th}}{[Tc=27]}$$

$$109_{29\text{th}} - 107_{28\text{th}} + 1 = 3_{\text{prime}} \frac{27\text{th}}{[Tc=28]}$$

$$113_{30\text{th}} - 109_{29\text{th}} + 1 = 5_{\text{prime}} \frac{28\text{th}}{[Tc=29]}$$

$$131_{32\text{th}} - 127_{31\text{th}} + 1 = 5_{\text{prime}} \frac{29\text{th}}{[Tc=31]}$$

$$137_{33\text{th}} - 131_{32\text{th}} + 1 = 7_{\text{prime}} \frac{30\text{th}}{[Tc=32]}$$

$$139_{34\text{th}} - 137_{33\text{th}} + 1 = 3_{\text{prime}} \frac{31\text{th}}{[Tc=33]}$$

$$149_{35\text{th}} - 139_{34\text{th}} + 1 = 11_{\text{prime}} \frac{32\text{th}}{[Tc=34]}$$

$$151_{36\text{th}} - 149_{35\text{th}} + 1 = 3_{\text{prime}} \frac{33\text{th}}{[Tc=35]}$$

$$157_{37\text{th}} - 151_{36\text{th}} + 1 = 7_{\text{prime}} \frac{34\text{th}}{[Tc=36]}$$

$$163_{38\text{th}} - 157_{37\text{th}} + 1 = 7_{\text{prime}} \frac{35\text{th}}{[Tc=37]}$$

$$167_{39\text{th}} - 163_{38\text{th}} + 1 = 5_{\text{prime}} \frac{36\text{th}}{[Tc=38]}$$

$$173_{40\text{th}} - 167_{39\text{th}} + 1 = 7_{\text{prime}} \frac{37\text{th}}{[Tc=39]}$$

$$179_{41\text{th}} - 173_{40\text{th}} + 1 = 7_{\text{prime}} \frac{38\text{th}}{[Tc=40]}$$

$$181_{42\text{th}} - 179_{41\text{th}} + 1 = 3_{\text{prime}} \frac{39\text{th}}{[Tc=41]}$$

$$191_{43\text{th}} - 181_{42\text{th}} + 1 = 11_{\text{prime}} \frac{40\text{th}}{[Tc=42]}$$

$$193_{44\text{th}} - 191_{43\text{th}} + 1 = 3_{\text{prime}} \frac{41\text{th}}{[Tc=43]}$$

$$197_{45\text{th}} - 193_{44\text{th}} + 1 = 5_{\text{prime}} \frac{42\text{th}}{[Tc=44]}$$

$$199_{46\text{th}} - 197_{45\text{th}} + 1 = 3_{\text{prime}} \frac{43\text{th}}{[Tc=45]}$$

$$211_{47\text{th}} - 199_{46\text{th}} + 1 = 13_{\text{prime}} \frac{44\text{th}}{[Tc=46]}$$

$$223_{48\text{th}} - 211_{47\text{th}} + 1 = 13_{\text{prime}} \frac{45\text{th}}{[Tc=47]}$$

$$227_{49\text{th}} - 223_{48\text{th}} + 1 = 5_{\text{prime}} \frac{46\text{th}}{[Tc=48]}$$

$$229_{50\text{th}} - 227_{49\text{th}} + 1 = 3_{\text{prime}} \frac{47\text{th}}{[Tc=49]}$$

$$233_{51\text{th}} - 229_{50\text{th}} + 1 = 5_{\text{prime}} \frac{48\text{th}}{[Tc=50]}$$

$$239_{52\text{th}} - 233_{51\text{th}} + 1 = 7_{\text{prime}} \frac{49\text{th}}{[Tc=51]}$$

$$241_{53\text{th}} - 239_{52\text{th}} + 1 = 3_{\text{prime}} \frac{50\text{th}}{[Tc=52]}$$

$$251_{54\text{th}} - 241_{53\text{th}} + 1 = 11_{\text{prime}} \frac{51\text{th}}{[Tc=53]}$$

$$257_{55\text{th}} - 251_{54\text{th}} + 1 = 7_{\text{prime}} \frac{52\text{th}}{[Tc=54]}$$

$$263_{56\text{th}} - 257_{55\text{th}} + 1 = 7_{\text{prime}} \frac{53\text{th}}{[Tc = 55]}$$

$$269_{57\text{th}} - 263_{56\text{th}} + 1 = 7_{\text{prime}} \frac{54\text{th}}{[Tc = 56]}$$

$$271_{58\text{th}} - 269_{57\text{th}} + 1 = 3_{\text{prime}} \frac{55\text{th}}{[Tc = 57]}$$

$$277_{59\text{th}} - 271_{58\text{th}} + 1 = 7_{\text{prime}} \frac{56\text{th}}{[Tc = 58]}$$

$$281_{60\text{th}} - 277_{59\text{th}} + 1 = 5_{\text{prime}} \frac{57\text{th}}{[Tc = 59]}$$

$$283_{61\text{th}} - 281_{60\text{th}} + 1 = 3_{\text{prime}} \frac{58\text{th}}{[Tc = 60]}$$

$$293_{62\text{th}} - 283_{61\text{th}} + 1 = 11_{\text{prime}} \frac{59\text{th}}{[Tc = 61]}$$

$$311_{64\text{th}} - 307_{63\text{th}} + 1 = 5_{\text{prime}} \frac{60\text{th}}{[Tc = 63]}$$

$$313_{65\text{th}} - 311_{64\text{th}} + 1 = 3_{\text{prime}} \frac{61\text{th}}{[Tc = 64]}$$

$$317_{66\text{th}} - 313_{65\text{th}} + 1 = 5_{\text{prime}} \frac{62\text{th}}{[Tc = 65]}$$

$$337_{68\text{th}} - 331_{67\text{th}} + 1 = 7_{\text{prime}} \frac{63\text{th}}{[Tc = 67]}$$

$$347_{69\text{th}} - 337_{68\text{th}} + 1 = 11_{\text{prime}} \frac{64\text{th}}{[Tc = 68]}$$

$$349_{70\text{th}} - 347_{69\text{th}} + 1 = 3_{\text{prime}} \frac{65\text{th}}{[Tc = 69]}$$

$$353_{71\text{th}} - 349_{70\text{th}} + 1 = 5_{\text{prime}} \frac{66\text{th}}{[Tc = 70]}$$

$$359_{72\text{th}} - 353_{71\text{th}} + 1 = 7_{\text{prime}} \frac{67\text{th}}{[Tc = 71]}$$

$$373_{74\text{th}} - 367_{73\text{th}} + 1 = 7_{\text{prime}} \frac{68\text{th}}{[Tc = 73]}$$

$$379_{75\text{th}} - 373_{74\text{th}} + 1 = 7_{\text{prime}} \frac{69\text{th}}{[Tc = 74]}$$

$$383_{76\text{th}} - 379_{75\text{th}} + 1 = 5_{\text{prime}} \frac{70\text{th}}{[Tc = 75]}$$

$$389_{77\text{ th}} - 383_{76\text{ th}} + 1 = 7_{\text{prime}} \frac{71\text{ th}}{[Tc = 76]}$$

$$401_{79\text{ th}} - 397_{78\text{ th}} + 1 = 5_{\text{prime}} \frac{72\text{ th}}{[Tc = 78]}$$

$$419_{81\text{ th}} - 409_{80\text{ th}} + 1 = 11_{\text{prime}} \frac{73\text{ th}}{[Tc = 80]}$$

$$421_{82\text{ th}} - 419_{81\text{ th}} + 1 = 3_{\text{prime}} \frac{74\text{ th}}{[Tc = 81]}$$

$$431_{83\text{ th}} - 421_{82\text{ th}} + 1 = 11_{\text{prime}} \frac{75\text{ th}}{[Tc = 82]}$$

$$433_{84\text{ th}} - 431_{83\text{ th}} + 1 = 3_{\text{prime}} \frac{76\text{ th}}{[Tc = 83]}$$

$$439_{85\text{ th}} - 433_{84\text{ th}} + 1 = 7_{\text{prime}} \frac{77\text{ th}}{[Tc = 84]}$$

$$443_{86\text{ th}} - 439_{85\text{ th}} + 1 = 5_{\text{prime}} \frac{78\text{ th}}{[Tc = 85]}$$

$$449_{87\text{ th}} - 443_{86\text{ th}} + 1 = 7_{\text{prime}} \frac{79\text{ th}}{[Tc = 86]}$$

$$461_{89\text{ th}} - 457_{88\text{ th}} + 1 = 5_{\text{prime}} \frac{80\text{ th}}{[Tc = 88]}$$

$$463_{90\text{ th}} - 461_{89\text{ th}} + 1 = 3_{\text{prime}} \frac{81\text{ th}}{[Tc = 89]}$$

$$467_{91\text{ th}} - 463_{90\text{ th}} + 1 = 5_{\text{prime}} \frac{82\text{ th}}{[Tc = 90]}$$

$$479_{92\text{ th}} - 467_{91\text{ th}} + 1 = 13_{\text{prime}} \frac{83\text{ th}}{[Tc = 91]}$$

$$491_{94\text{ th}} - 487_{93\text{ th}} + 1 = 5_{\text{prime}} \frac{84\text{ th}}{[Tc = 93]}$$

$$503_{96\text{ th}} - 499_{95\text{ th}} + 1 = 5_{\text{prime}} \frac{85\text{ th}}{[Tc = 95]}$$

$$509_{97\text{ th}} - 503_{96\text{ th}} + 1 = 7_{\text{prime}} \frac{86\text{ th}}{[Tc = 96]}$$

$$521_{98\text{ th}} - 509_{97\text{ th}} + 1 = 13_{\text{prime}} \frac{87\text{ th}}{[Tc = 97]}$$

$$523_{99\text{ th}} - 521_{98\text{ th}} + 1 = 3_{\text{prime}} \frac{88\text{ th}}{[Tc = 98]}$$

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$$541_{100th} - 523_{99th} + 1 = 19_{prime} \frac{89th}{[Tc=99]}$$

$$547_{101th} - 541_{100th} + 1 = 7_{prime} \frac{90th}{[Tc=100]}$$

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