

> # $P=x^2+y^2+z^2$ by H·E'20-10-2:

> for e from 2 to 5 do print() :

print(1000 番目までの素数の{e}乗数分解 {100} 個毎に{10} 個) : print() : c :=

0 : tc := 0 : for h from 1 to 1000 do P := ithprime(h) : c := 0 : for x from 2 to 100 do

for y from x + 1 to 100 do for z from y + 1 to 100 do if $P=x^e+y^e+z^e$ then c := c + 1 :

tc := tc + 1 : if tc mod 100 ≤ 10 then print(P[h th p][tc]=[x]^e+ [y]^e+ [z]^e) fi fi:if c

= 1 then break if :od: if c = 1 then break if :od:if c = 1 then break if :od:od:od:

1000 番目までの素数の {2} 乗数分解 {100} 個毎に {10} 個

$$(29_{10th p})_1 = [2]^2 + [3]^2 + [4]^2$$

$$(61_{18th p})_2 = [3]^2 + [4]^2 + [6]^2$$

$$(83_{23th p})_3 = [3]^2 + [5]^2 + [7]^2$$

$$(89_{24th p})_4 = [2]^2 + [6]^2 + [7]^2$$

$$(101_{26th p})_5 = [2]^2 + [4]^2 + [9]^2$$

$$(109_{29th p})_6 = [3]^2 + [6]^2 + [8]^2$$

$$(113_{30th p})_7 = [2]^2 + [3]^2 + [10]^2$$

$$(139_{34th p})_8 = [3]^2 + [7]^2 + [9]^2$$

$$(149_{35th p})_9 = [2]^2 + [8]^2 + [9]^2$$

$$(157_{37th p})_{10} = [2]^2 + [3]^2 + [12]^2$$

$$(947_{161th p})_{100} = [5]^2 + [9]^2 + [29]^2$$

$$(953_{162th p})_{101} = [2]^2 + [7]^2 + [30]^2$$

$$(971_{164th p})_{102} = [3]^2 + [11]^2 + [29]^2$$

$$(977_{165th p})_{103} = [6]^2 + [10]^2 + [29]^2$$

$$(997_{168th p})_{104} = [4]^2 + [9]^2 + [30]^2$$

$$(1009_{169th p})_{105} = [3]^2 + [10]^2 + [30]^2$$

$$(1013_{170th p})_{106} = [2]^2 + [15]^2 + [28]^2$$

$$(1019_{171th p})_{107} = [3]^2 + [7]^2 + [31]^2$$

$$(1021_{172th p})_{108} = [2]^2 + [21]^2 + [24]^2$$

$$(1033_{174th p})_{109} = [4]^2 + [21]^2 + [24]^2$$

$$(1049_{176th p})_{110} = [3]^2 + [4]^2 + [32]^2$$

$$\begin{aligned}
(1973_{298 \text{ th } p})_{200} &= [6]^2 + [16]^2 + [41]^2 \\
(1979_{299 \text{ th } p})_{201} &= [3]^2 + [11]^2 + [43]^2 \\
(1987_{300 \text{ th } p})_{202} &= [5]^2 + [21]^2 + [39]^2 \\
(1993_{301 \text{ th } p})_{203} &= [2]^2 + [15]^2 + [42]^2 \\
(1997_{302 \text{ th } p})_{204} &= [2]^2 + [12]^2 + [43]^2 \\
(2003_{304 \text{ th } p})_{205} &= [3]^2 + [25]^2 + [37]^2 \\
(2011_{305 \text{ th } p})_{206} &= [7]^2 + [21]^2 + [39]^2 \\
(2017_{306 \text{ th } p})_{207} &= [12]^2 + [28]^2 + [33]^2 \\
(2027_{307 \text{ th } p})_{208} &= [3]^2 + [13]^2 + [43]^2 \\
(2029_{308 \text{ th } p})_{209} &= [2]^2 + [27]^2 + [36]^2 \\
(2053_{310 \text{ th } p})_{210} &= [6]^2 + [9]^2 + [44]^2 \\
(2971_{429 \text{ th } p})_{300} &= [3]^2 + [19]^2 + [51]^2 \\
(3001_{431 \text{ th } p})_{301} &= [2]^2 + [9]^2 + [54]^2 \\
(3011_{432 \text{ th } p})_{302} &= [5]^2 + [31]^2 + [45]^2 \\
(3019_{433 \text{ th } p})_{303} &= [9]^2 + [27]^2 + [47]^2 \\
(3037_{435 \text{ th } p})_{304} &= [2]^2 + [27]^2 + [48]^2 \\
(3041_{436 \text{ th } p})_{305} &= [2]^2 + [11]^2 + [54]^2 \\
(3049_{437 \text{ th } p})_{306} &= [4]^2 + [27]^2 + [48]^2 \\
(3061_{438 \text{ th } p})_{307} &= [6]^2 + [33]^2 + [44]^2 \\
(3067_{439 \text{ th } p})_{308} &= [5]^2 + [21]^2 + [51]^2 \\
(3083_{441 \text{ th } p})_{309} &= [3]^2 + [7]^2 + [55]^2 \\
(3089_{442 \text{ th } p})_{310} &= [2]^2 + [13]^2 + [54]^2 \\
(4073_{561 \text{ th } p})_{400} &= [2]^2 + [10]^2 + [63]^2 \\
(4091_{563 \text{ th } p})_{401} &= [3]^2 + [19]^2 + [61]^2 \\
(4093_{564 \text{ th } p})_{402} &= [3]^2 + [22]^2 + [60]^2 \\
(4099_{565 \text{ th } p})_{403} &= [3]^2 + [11]^2 + [63]^2 \\
(4129_{568 \text{ th } p})_{404} &= [4]^2 + [12]^2 + [63]^2
\end{aligned}$$

$$\begin{aligned}
(4133_{569 \text{ th } p})_{405} &= [2]^2 + [23]^2 + [60]^2 \\
(4139_{570 \text{ th } p})_{406} &= [5]^2 + [33]^2 + [55]^2 \\
(4153_{571 \text{ th } p})_{407} &= [2]^2 + [30]^2 + [57]^2 \\
(4157_{572 \text{ th } p})_{408} &= [2]^2 + [43]^2 + [48]^2 \\
(4177_{574 \text{ th } p})_{409} &= [3]^2 + [18]^2 + [62]^2 \\
(4201_{575 \text{ th } p})_{410} &= [5]^2 + [24]^2 + [60]^2 \\
(5261_{698 \text{ th } p})_{500} &= [3]^2 + [34]^2 + [64]^2 \\
(5273_{699 \text{ th } p})_{501} &= [5]^2 + [8]^2 + [72]^2 \\
(5281_{701 \text{ th } p})_{502} &= [4]^2 + [9]^2 + [72]^2 \\
(5297_{702 \text{ th } p})_{503} &= [3]^2 + [38]^2 + [62]^2 \\
(5309_{704 \text{ th } p})_{504} &= [2]^2 + [11]^2 + [72]^2 \\
(5323_{705 \text{ th } p})_{505} &= [3]^2 + [33]^2 + [65]^2 \\
(5333_{706 \text{ th } p})_{506} &= [2]^2 + [48]^2 + [55]^2 \\
(5347_{707 \text{ th } p})_{507} &= [3]^2 + [37]^2 + [63]^2 \\
(5381_{709 \text{ th } p})_{508} &= [4]^2 + [6]^2 + [73]^2 \\
(5387_{710 \text{ th } p})_{509} &= [3]^2 + [7]^2 + [73]^2 \\
(5393_{711 \text{ th } p})_{510} &= [2]^2 + [30]^2 + [67]^2 \\
(6427_{836 \text{ th } p})_{600} &= [3]^2 + [33]^2 + [73]^2 \\
(6449_{837 \text{ th } p})_{601} &= [2]^2 + [19]^2 + [78]^2 \\
(6451_{838 \text{ th } p})_{602} &= [3]^2 + [41]^2 + [69]^2 \\
(6469_{839 \text{ th } p})_{603} &= [9]^2 + [42]^2 + [68]^2 \\
(6473_{840 \text{ th } p})_{604} &= [2]^2 + [50]^2 + [63]^2 \\
(6481_{841 \text{ th } p})_{605} &= [3]^2 + [46]^2 + [66]^2 \\
(6491_{842 \text{ th } p})_{606} &= [5]^2 + [15]^2 + [79]^2 \\
(6521_{843 \text{ th } p})_{607} &= [4]^2 + [24]^2 + [77]^2 \\
(6529_{844 \text{ th } p})_{608} &= [2]^2 + [21]^2 + [78]^2 \\
(6547_{845 \text{ th } p})_{609} &= [9]^2 + [15]^2 + [79]^2
\end{aligned}$$


$$\begin{aligned}
(6553_{847 \text{ th } p})_{610} &= [3]^2 + [12]^2 + [80]^2 \\
(7577_{962 \text{ th } p})_{700} &= [4]^2 + [44]^2 + [75]^2 \\
(7589_{964 \text{ th } p})_{701} &= [2]^2 + [4]^2 + [87]^2 \\
(7603_{966 \text{ th } p})_{702} &= [3]^2 + [5]^2 + [87]^2 \\
(7621_{968 \text{ th } p})_{703} &= [4]^2 + [6]^2 + [87]^2 \\
(7643_{970 \text{ th } p})_{704} &= [5]^2 + [7]^2 + [87]^2 \\
(7649_{971 \text{ th } p})_{705} &= [4]^2 + [8]^2 + [87]^2 \\
(7669_{972 \text{ th } p})_{706} &= [6]^2 + [8]^2 + [87]^2 \\
(7673_{973 \text{ th } p})_{707} &= [2]^2 + [10]^2 + [87]^2 \\
(7681_{974 \text{ th } p})_{708} &= [2]^2 + [54]^2 + [69]^2 \\
(7691_{976 \text{ th } p})_{709} &= [5]^2 + [21]^2 + [85]^2 \\
(7699_{977 \text{ th } p})_{710} &= [3]^2 + [11]^2 + [87]^2
\end{aligned}$$

1000 番目までの素数の {3} 乗数分解 {100} 個毎に {10} 個

$$\begin{aligned}
(197_{45 \text{ th } p})_1 &= [2]^3 + [4]^3 + [5]^3 \\
(251_{54 \text{ th } p})_2 &= [2]^3 + [3]^3 + [6]^3 \\
(307_{63 \text{ th } p})_3 &= [3]^3 + [4]^3 + [6]^3 \\
(349_{70 \text{ th } p})_4 &= [2]^3 + [5]^3 + [6]^3 \\
(547_{101 \text{ th } p})_5 &= [2]^3 + [3]^3 + [8]^3 \\
(701_{126 \text{ th } p})_6 &= [4]^3 + [5]^3 + [8]^3 \\
(853_{147 \text{ th } p})_7 &= [5]^3 + [6]^3 + [8]^3 \\
(863_{150 \text{ th } p})_8 &= [2]^3 + [7]^3 + [8]^3 \\
(881_{152 \text{ th } p})_9 &= [3]^3 + [5]^3 + [9]^3 \\
(919_{157 \text{ th } p})_{10} &= [4]^3 + [7]^3 + [8]^3
\end{aligned}$$

1000 番目までの素数の {4} 乗数分解 {100} 個毎に {10} 個

$$(353_{71 \text{ th } p})_1 = [2]^4 + [3]^4 + [4]^4$$


$$(6833_{880th p})_2 = [2]^4 + [4]^4 + [9]^4$$

$$(7793_{987th p})_3 = [6]^4 + [7]^4 + [8]^4$$

$$(7873_{994th p})_4 = [2]^4 + [6]^4 + [9]^4$$

1000 番目までの素数の {5} 乗数分解 {100} 個毎に {10} 個

(1)