In[ ]:=
```
P = {}
```

Out[ ]=

```
{}
```

In[ ]:=
```
b[x_, y_, z_] := Piecewise[{{{{z, 0, 0}, {0, z, 0}, {0, 0, z}}, x == y == 0},
   {{{0, y, y}, {y, 0, y}, {y, y, 0}, {0, y, -y}, {y, 0, -y}, {y, -y, 0}}, x == 0 && y == z},
   {{{0, y, z}, {y, 0, z}, {y, z, 0}, {0, z, y}, {z, 0, y}, {z, y, 0}, {0, -y, z},
     {-y, 0, z}, {-y, z, 0}, {0, z, -y}, {z, 0, -y}, {z, -y, 0}}, x == 0 && y ≠ z},
   {{{x, x, x}, {-x, x, x}, {x, -x, x}, {x, x, -x}}, x == y == z ≠ 0},
   {{{z, x, x}, {x, z, x}, {x, x, z}, {-z, x, x}, {x, -z, x}, {x, x, -z}, {-x, x, z},
     {x, -x, z}, {-x, z, x}, {x, z, -x}, {z, -x, x}, {z, x, -x}}, x == y && x ≠ 0 && z ≠ 0},
   {{{x, y, y}, {y, x, y}, {y, y, x}, {-x, y, y}, {y, -x, y}, {y, y, -x}, {-y, y, x},
     {y, -y, x}, {-y, x, y}, {y, x, -y}, {x, -y, y}, {x, y, -y}}, y == z && y ≠ 0 && x ≠ 0},
   {{{x, y, z}, {-x, y, z}, {x, -y, z}, {x, y, -z}, {y, x, z}, {-y, x, z}, {y, -x, z},
     {y, x, -z}, {y, z, x}, {-y, z, x}, {y, -z, x}, {y, z, -x}, {x, z, y}, {-x, z, y},
     {x, -z, y}, {x, z, -y}, {z, x, y}, {-z, x, y}, {z, -x, y}, {z, x, -y}, {z, y, x},
     {-z, y, x}, {z, -y, x}, {z, y, -x}}, x ≠ y && x ≠ z && y ≠ z && x ≠ 0 && y ≠ 0 && z ≠ 0}}]

For[i = 0, i ≤ 1000, i = i + 1,
 For[j = i, j ≤ 1000, j = j + 1,
  For[k = j, k ≤ 1000, k = k + 1,
   If[
    2^IntegerExponent[(i^2 + j^2 + k^2), 2] * 3^IntegerExponent[(i^2 + j^2 + k^2), 3] *
      11^IntegerExponent[(i^2 + j^2 + k^2), 11] == (i^2 + j^2 + k^2),
    If[GCD[i, j, k] == 1,
     AppendTo[P, b[i, j, k]
     ]
    ]
   ]
  ]
 ]
]
(*This is a useful piece of code. One asks Mathematica to find the integer
 exponent of each prime you're interested in. Then you raise the individual
 primes to their integer exponents and have Mathematica check to see if,
multiplied together, this gives you the norm squared. If it does,
you know that your norm squared is only divisible
 by the requesite primes. Using the AppendTo function,
you can then get mathematica to add all the good vectors to your master list.*)
```

In[•]:=
```
V = Partition[Flatten[P], 3]
```

Out[•]=
```
{{1, 0, 0}, {0, 1, 0}, {0, 0, 1}, {0, 1, 1}, {1, 0, 1},
 {1, 1, 0}, {0, 1, -1}, {1, 0, -1}, {1, -1, 0}, {1, 1, 1},
 {-1, 1, 1}, {1, -1, 1}, {1, 1, -1}, ··· 93 911 ···, {986, 995, -974},
 {974, 995, 986}, {-974, 995, 986}, {974, -995, 986}, {974, 995, -986},
 {995, 974, 986}, {-995, 974, 986}, {995, -974, 986}, {995, 974, -986},
 {995, 986, 974}, {-995, 986, 974}, {995, -986, 974}, {995, 986, -974}}
```

large output | show less | show more | show all | set si | ze limit...

In[•]:=
```
W = {{1, 0, 0}, {1, 0, -1}, {1, -1, 0}}
```

Out[•]=
```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}}
```

In[•]:=
```
B = {}
```

Out[•]=
```
{}
```

In[•]:=
```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q[[i]].W[[k]] == 0,
   AppendTo[B', Q[[i]], Unevaluated[Sequence[]]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM[[j]].B[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], B[[l]]] / GCD[Cross[MM[[j]], B[[l]]][[1]],
      Cross[MM[[j]], B[[l]]][[2]], Cross[MM[[j]], B[[l]]][[3]]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM[[j]].MM[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], MM[[l]]] / GCD[Cross[MM[[j]], MM[[l]]][[1]],
      Cross[MM[[j]], MM[[l]]][[2]], Cross[MM[[j]], MM[[l]]][[3]]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[•]=
```
{}
```

Out[ ]=

```
{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
 {-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
 {-1000, 821, 524}, {-1000, 916, 331}, ··· 93 918 ···, {1000, 524, 821},
 {1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
 {1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}
```

large output | show less | show more | show all | set si | ze limit...

Out[ ]=

```
{{0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1}, {1, -140, 1}, {1, -22, 1}, {1, -19, 1},
 {1, -14, 1}, {1, -8, 1}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1},
 {1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5},
 {1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2},
 {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19}, {1, 1, 22},
 {1, 1, 140}, {1, 2, 1}, {1, 3, 1}, {1, 4, 1}, {1, 5, 1}, {1, 8, 1}, {1, 14, 1},
 {1, 19, 1}, {1, 22, 1}, {1, 140, 1}, {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2},
 {2, 2, -17}, {2, 2, -5}, {2, 2, -1}, {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2},
 {2, 17, 2}, {3, -2, 3}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {4, -155, 4}, {4, -7, 4},
 {4, -1, 4}, {4, 1, 4}, {4, 4, -155}, {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7},
 {4, 4, 155}, {4, 7, 4}, {4, 155, 4}, {5, -268, 5}, {5, -29, 5}, {5, -26, 5},
 {5, -7, 5}, {5, -4, 5}, {5, -2, 5}, {5, 2, 5}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29},
 {5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7},
 {5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 26, 5}, {5, 29, 5}, {5, 268, 5},
 {6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6}, {7, -109, 7}, {7, -89, 7}, {7, -12, 7},
 {7, -10, 7}, {7, -8, 7}, {7, -1, 7}, {7, 1, 7}, {7, 7, -109}, {7, 7, -89}, {7, 7, -12},
 {7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8}, {7, 7, 10}, {7, 7, 12},
 {7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7}, {7, 89, 7}, {7, 109, 7},
 {8, -695, 8}, {8, -31, 8}, {8, -13, 8}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13},
 {8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, 8}, {8, 31, 8}, {8, 695, 8}, {9, -50, 9},
 {9, 9, -50}, {9, 9, 50}, {9, 50, 9}, {10, -23, 10}, {10, 10, -23}, {10, 10, 23},
 {10, 23, 10}, {11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1}, {13, -43, 13},
 {13, -38, 13}, {13, -16, 13}, {13, -5, 13}, {13, 5, 13}, {13, 13, -43}, {13, 13, -38},
 {13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16}, {13, 13, 38}, {13, 13, 43},
 {13, 16, 13}, {13, 38, 13}, {13, 43, 13}, {14, -97, 14}, {14, 14, -97}, {14, 14, 97},
 {14, 97, 14}, {16, -59, 16}, {16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {17, -112, 17},
 {17, -40, 17}, {17, -4, 17}, {17, 4, 17}, {17, 17, -112}, {17, 17, -40}, {17, 17, -4},
 {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17}, {17, 112, 17}, {19, -68, 19},
 {19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, 19}, {19, 19, -68}, {19, 19, -13},
 {19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 68, 19}, {20, -17, 20},
 {20, 17, 20}, {20, 20, -17}, {20, 20, 17}, {22, -241, 22}, {22, 22, -241},
 {22, 22, 241}, {22, 241, 22}, {23, -168, 23}, {23, -74, 23}, {23, -47, 23},
 {23, -20, 23}, {23, 20, 23}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
```

{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 47, 23},
{23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25}, {25, 25, -64},
{25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {29, -10, 29}, {29, 10, 29},
{29, 29, -10}, {29, 29, 10}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16}, {31, 31, 16},
{32, -25, 32}, {32, 25, 32}, {32, 32, -25}, {32, 32, 25}, {34, -41, 34}, {34, -19, 34},
{34, 19, 34}, {34, 34, -41}, {34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34},
{37, -23, 37}, {37, 23, 37}, {37, 37, -23}, {37, 37, 23}, {38, -359, 38},
{38, 38, -359}, {38, 38, 359}, {38, 359, 38}, {41, -416, 41}, {41, -68, 41},
{41, 41, -416}, {41, 41, -68}, {41, 41, 68}, {41, 41, 416}, {41, 68, 41},
{41, 416, 41}, {43, -91, 43}, {43, -26, 43}, {43, 26, 43}, {43, 43, -91},
{43, 43, -26}, {43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47},
{47, 47, -46}, {47, 47, 46}, {49, -106, 49}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {53, -886, 53}, {53, -49, 53}, {53, 49, 53}, {53, 53, -886},
{53, 53, -49}, {53, 53, 49}, {53, 53, 886}, {53, 886, 53}, {56, -17, 56}, {56, 17, 56},
{56, 56, -17}, {56, 56, 17}, {59, -32, 59}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32},
{61, -370, 61}, {61, -191, 61}, {61, 61, -370}, {61, 61, -191}, {61, 61, 191},
{61, 61, 370}, {61, 191, 61}, {61, 370, 61}, {68, -281, 68}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, 71, -139}, {71, 71, 139}, {71, 139, 71}, {73, -95, 73},
{73, 73, -95}, {73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559},
{74, 74, 559}, {74, 559, 74}, {82, -103, 82}, {82, 82, -103}, {82, 82, 103},
{82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125}, {83, 125, 83},
{84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23}, {89, -14, 89}, {89, 14, 89},
{89, 89, -14}, {89, 89, 14}, {91, -86, 91}, {91, 86, 91}, {91, 91, -86}, {91, 91, 86},
{95, -232, 95}, {95, -146, 95}, {95, 95, -232}, {95, 95, -146}, {95, 95, 146},
{95, 95, 232}, {95, 146, 95}, {95, 232, 95}, {97, -28, 97}, {97, 28, 97},
{97, 97, -28}, {97, 97, 28}, {103, -164, 103}, {103, 103, -164}, {103, 103, 164},
{103, 164, 103}, {107, -145, 107}, {107, 107, -145}, {107, 107, 145}, {107, 145, 107},
{109, -14, 109}, {109, 14, 109}, {109, 109, -14}, {109, 109, 14}, {116, -95, 116},
{116, 95, 116}, {116, 116, -95}, {116, 116, 95}, {124, -541, 124}, {124, -431, 124},
{124, 124, -541}, {124, 124, -431}, {124, 124, 431}, {124, 124, 541}, {124, 431, 124},
{124, 541, 124}, {125, -166, 125}, {125, 125, -166}, {125, 125, 166}, {125, 166, 125},
{130, -313, 130}, {130, 130, -313}, {130, 130, 313}, {130, 313, 130}, {134, -5, 134},
{134, 5, 134}, {134, 134, -5}, {134, 134, 5}, {137, -422, 137}, {137, 137, -422},
{137, 137, 422}, {137, 422, 137}, {139, -628, 139}, {139, -263, 139}, {139, -142, 139},
{139, 139, -628}, {139, 139, -263}, {139, 139, -142}, {139, 139, 142},
{139, 139, 263}, {139, 139, 628}, {139, 142, 139}, {139, 263, 139}, {139, 628, 139},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -163, 151},
{151, 151, -163}, {151, 151, 163}, {151, 163, 151}, {155, -8, 155}, {155, 8, 155},
{155, 155, -8}, {155, 155, 8}, {163, -302, 163}, {163, 163, -302}, {163, 163, 302},
{163, 302, 163}, {167, -457, 167}, {167, 167, -457}, {167, 167, 457}, {167, 457, 167},
{175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175}, {185, -61, 185},
{185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -122, 191}, {191, 122, 191},

```
{191, 191, -122}, {191, 191, 122}, {197, -526, 197}, {197, 197, -526},
{197, 197, 526}, {197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41},
{208, 208, 41}, {211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137},
{221, -932, 221}, {221, 221, -932}, {221, 221, 932}, {221, 932, 221},
{229, -237, 229}, {229, 229, -237}, {229, 229, 237}, {229, 237, 229},
{237, -458, 237}, {237, 237, -458}, {237, 237, 458}, {237, 458, 237}, {241, -44, 241},
{241, 44, 241}, {241, 241, -44}, {241, 241, 44}, {263, -278, 263}, {263, -197, 263},
{263, 197, 263}, {263, 263, -278}, {263, 263, -197}, {263, 263, 197}, {263, 263, 278},
{263, 278, 263}, {281, -136, 281}, {281, 136, 281}, {281, 281, -136}, {281, 281, 136},
{283, -794, 283}, {283, 283, -794}, {283, 283, 794}, {283, 794, 283}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307}, {307, 307, -679},
{307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313}, {313, 313, -260},
{313, 313, 260}, {314, -139, 314}, {314, 139, 314}, {314, 314, -139}, {314, 314, 139},
{329, -920, 329}, {329, 329, -920}, {329, 329, 920}, {329, 920, 329}, {349, -145, 349},
{349, 145, 349}, {349, 349, -145}, {349, 349, 145}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {397, -283, 397}, {397, 283, 397}, {397, 397, -283},
{397, 397, 283}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248}, {431, 431, 248},
{443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53}, {457, -334, 457},
{457, 334, 457}, {457, 457, -334}, {457, 457, 334}, {460, -329, 460}, {460, 329, 460},
{460, 460, -329}, {460, 460, 329}, {466, -221, 466}, {466, 221, 466}, {466, 466, -221},
{466, 466, 221}, {485, -707, 485}, {485, 485, -707}, {485, 485, 707}, {485, 707, 485},
{494, -553, 494}, {494, 494, -553}, {494, 494, 553}, {494, 553, 494}, {496, -833, 496},
{496, 496, -833}, {496, 496, 833}, {496, 833, 496}, {541, -248, 541}, {541, 248, 541},
{541, 541, -248}, {541, 541, 248}, {553, -988, 553}, {553, 553, -988},
{553, 553, 988}, {553, 988, 553}, {559, -148, 559}, {559, 148, 559}, {559, 559, -148},
{559, 559, 148}, {665, -293, 665}, {665, 293, 665}, {665, 665, -293}, {665, 665, 293},
{679, -614, 679}, {679, 614, 679}, {679, 679, -614}, {679, 679, 614},
{680, -511, 680}, {680, 511, 680}, {680, 680, -511}, {680, 680, 511}, {695, -16, 695},
{695, 16, 695}, {695, 695, -16}, {695, 695, 16}, {703, -679, 703}, {703, 679, 703},
{703, 703, -679}, {703, 703, 679}, {707, -970, 707}, {707, 707, -970},
{707, 707, 970}, {707, 970, 707}, {767, -350, 767}, {767, 350, 767}, {767, 767, -350},
{767, 767, 350}, {791, -580, 791}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992},
{833, 992, 833}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}
```

Out[ ]=

```
{{0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1}, {1, -140, 1}, {1, -22, 1}, {1, -19, 1},
{1, -14, 1}, {1, -8, 1}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1},
{1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5},
{1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2},
{1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19}, {1, 1, 22},
{1, 1, 140}, {1, 2, 1}, {1, 3, 1}, {1, 4, 1}, {1, 5, 1}, {1, 8, 1}, {1, 14, 1},
{1, 19, 1}, {1, 22, 1}, {1, 140, 1}, {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2},
{2, 2, -17}, {2, 2, -5}, {2, 2, -1}, {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2},
{2, 17, 2}, {3, -2, 3}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {4, -155, 4}, {4, -7, 4},
```

{4, -1, 4}, {4, 1, 4}, {4, 4, -155}, {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7},
{4, 4, 155}, {4, 7, 4}, {4, 155, 4}, {5, -268, 5}, {5, -29, 5}, {5, -26, 5},
{5, -7, 5}, {5, -4, 5}, {5, -2, 5}, {5, 2, 5}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29},
{5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7},
{5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 26, 5}, {5, 29, 5}, {5, 268, 5},
{6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6}, {7, -109, 7}, {7, -89, 7}, {7, -12, 7},
{7, -10, 7}, {7, -8, 7}, {7, -1, 7}, {7, 1, 7}, {7, 7, -109}, {7, 7, -89}, {7, 7, -12},
{7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8}, {7, 7, 10}, {7, 7, 12},
{7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7}, {7, 89, 7}, {7, 109, 7},
{8, -695, 8}, {8, -31, 8}, {8, -13, 8}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13},
{8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, 8}, {8, 31, 8}, {8, 695, 8}, {9, -50, 9},
{9, 9, -50}, {9, 9, 50}, {9, 50, 9}, {10, -23, 10}, {10, 10, -23}, {10, 10, 23},
{10, 23, 10}, {11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1}, {13, -43, 13},
{13, -38, 13}, {13, -16, 13}, {13, -5, 13}, {13, 5, 13}, {13, 13, -43}, {13, 13, -38},
{13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16}, {13, 13, 38}, {13, 13, 43},
{13, 16, 13}, {13, 38, 13}, {13, 43, 13}, {14, -97, 14}, {14, 14, -97}, {14, 14, 97},
{14, 97, 14}, {16, -59, 16}, {16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {17, -112, 17},
{17, -40, 17}, {17, -4, 17}, {17, 4, 17}, {17, 17, -112}, {17, 17, -40}, {17, 17, -4},
{17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17}, {17, 112, 17}, {19, -68, 19},
{19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, 19}, {19, 19, -68}, {19, 19, -13},
{19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 68, 19}, {20, -17, 20},
{20, 17, 20}, {20, 20, -17}, {20, 20, 17}, {22, -241, 22}, {22, 22, -241},
{22, 22, 241}, {22, 241, 22}, {23, -168, 23}, {23, -74, 23}, {23, -47, 23},
{23, -20, 23}, {23, 20, 23}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 47, 23},
{23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25}, {25, 25, -64},
{25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {29, -10, 29}, {29, 10, 29},
{29, 29, -10}, {29, 29, 10}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16}, {31, 31, 16},
{32, -25, 32}, {32, 25, 32}, {32, 32, -25}, {32, 32, 25}, {34, -41, 34}, {34, -19, 34},
{34, 19, 34}, {34, 34, -41}, {34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34},
{37, -23, 37}, {37, 23, 37}, {37, 37, -23}, {37, 37, 23}, {38, -359, 38},
{38, 38, -359}, {38, 38, 359}, {38, 359, 38}, {41, -416, 41}, {41, -68, 41},
{41, 41, -416}, {41, 41, -68}, {41, 41, 68}, {41, 41, 416}, {41, 68, 41},
{41, 416, 41}, {43, -91, 43}, {43, -26, 43}, {43, 26, 43}, {43, 43, -91},
{43, 43, -26}, {43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47},
{47, 47, -46}, {47, 47, 46}, {49, -106, 49}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {53, -886, 53}, {53, -49, 53}, {53, 49, 53}, {53, 53, -886},
{53, 53, -49}, {53, 53, 49}, {53, 53, 886}, {53, 886, 53}, {56, -17, 56}, {56, 17, 56},
{56, 56, -17}, {56, 56, 17}, {59, -32, 59}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32},
{61, -370, 61}, {61, -191, 61}, {61, 61, -370}, {61, 61, -191}, {61, 61, 191},
{61, 61, 370}, {61, 191, 61}, {61, 370, 61}, {68, -281, 68}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, 71, -139}, {71, 71, 139}, {71, 139, 71}, {73, -95, 73},
{73, 73, -95}, {73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559},

{74, 74, 559}, {74, 559, 74}, {82, -103, 82}, {82, 82, -103}, {82, 82, 103},
{82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125}, {83, 125, 83},
{84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23}, {89, -14, 89}, {89, 14, 89},
{89, 89, -14}, {89, 89, 14}, {91, -86, 91}, {91, 86, 91}, {91, 91, -86}, {91, 91, 86},
{95, -232, 95}, {95, -146, 95}, {95, 95, -232}, {95, 95, -146}, {95, 95, 146},
{95, 95, 232}, {95, 146, 95}, {95, 232, 95}, {97, -28, 97}, {97, 28, 97},
{97, 97, -28}, {97, 97, 28}, {103, -164, 103}, {103, 103, -164}, {103, 103, 164},
{103, 164, 103}, {107, -145, 107}, {107, 107, -145}, {107, 107, 145}, {107, 145, 107},
{109, -14, 109}, {109, 14, 109}, {109, 109, -14}, {109, 109, 14}, {116, -95, 116},
{116, 95, 116}, {116, 116, -95}, {116, 116, 95}, {124, -541, 124}, {124, -431, 124},
{124, 124, -541}, {124, 124, -431}, {124, 124, 431}, {124, 124, 541}, {124, 431, 124},
{124, 541, 124}, {125, -166, 125}, {125, 125, -166}, {125, 125, 166}, {125, 166, 125},
{130, -313, 130}, {130, 130, -313}, {130, 130, 313}, {130, 313, 130}, {134, -5, 134},
{134, 5, 134}, {134, 134, -5}, {134, 134, 5}, {137, -422, 137}, {137, 137, -422},
{137, 137, 422}, {137, 422, 137}, {139, -628, 139}, {139, -263, 139}, {139, -142, 139},
{139, 139, -628}, {139, 139, -263}, {139, 139, -142}, {139, 139, 142},
{139, 139, 263}, {139, 139, 628}, {139, 142, 139}, {139, 263, 139}, {139, 628, 139},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -163, 151},
{151, 151, -163}, {151, 151, 163}, {151, 163, 151}, {155, -8, 155}, {155, 8, 155},
{155, 155, -8}, {155, 155, 8}, {163, -302, 163}, {163, 163, -302}, {163, 163, 302},
{163, 302, 163}, {167, -457, 167}, {167, 167, -457}, {167, 167, 457}, {167, 457, 167},
{175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175}, {185, -61, 185},
{185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -122, 191}, {191, 122, 191},
{191, 191, -122}, {191, 191, 122}, {197, -526, 197}, {197, 197, -526},
{197, 197, 526}, {197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41},
{208, 208, 41}, {211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137},
{221, -932, 221}, {221, 221, -932}, {221, 221, 932}, {221, 932, 221},
{229, -237, 229}, {229, 229, -237}, {229, 229, 237}, {229, 237, 229},
{237, -458, 237}, {237, 237, -458}, {237, 237, 458}, {237, 458, 237}, {241, -44, 241},
{241, 44, 241}, {241, 241, -44}, {241, 241, 44}, {263, -278, 263}, {263, -197, 263},
{263, 197, 263}, {263, 263, -278}, {263, 263, -197}, {263, 263, 197}, {263, 263, 278},
{263, 278, 263}, {281, -136, 281}, {281, 136, 281}, {281, 281, -136}, {281, 281, 136},
{283, -794, 283}, {283, 283, -794}, {283, 283, 794}, {283, 794, 283}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307}, {307, 307, -679},
{307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313}, {313, 313, -260},
{313, 313, 260}, {314, -139, 314}, {314, 139, 314}, {314, 314, -139}, {314, 314, 139},
{329, -920, 329}, {329, 329, -920}, {329, 329, 920}, {329, 920, 329}, {349, -145, 349},
{349, 145, 349}, {349, 349, -145}, {349, 349, 145}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {397, -283, 397}, {397, 283, 397}, {397, 397, -283},
{397, 397, 283}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248}, {431, 431, 248},
{443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53}, {457, -334, 457},
{457, 334, 457}, {457, 457, -334}, {457, 457, 334}, {460, -329, 460}, {460, 329, 460},
{460, 460, -329}, {460, 460, 329}, {466, -221, 466}, {466, 221, 466}, {466, 466, -221},

```
 {466, 466, 221}, {485, -707, 485}, {485, 485, -707}, {485, 485, 707}, {485, 707, 485},
 {494, -553, 494}, {494, 494, -553}, {494, 494, 553}, {494, 553, 494}, {496, -833, 496},
 {496, 496, -833}, {496, 496, 833}, {496, 833, 496}, {541, -248, 541}, {541, 248, 541},
 {541, 541, -248}, {541, 541, 248}, {553, -988, 553}, {553, 553, -988},
 {553, 553, 988}, {553, 988, 553}, {559, -148, 559}, {559, 148, 559}, {559, 559, -148},
 {559, 559, 148}, {665, -293, 665}, {665, 293, 665}, {665, 665, -293}, {665, 665, 293},
 {679, -614, 679}, {679, 614, 679}, {679, 679, -614}, {679, 679, 614},
 {680, -511, 680}, {680, 511, 680}, {680, 680, -511}, {680, 680, 511}, {695, -16, 695},
 {695, 16, 695}, {695, 695, -16}, {695, 695, 16}, {703, -679, 703}, {703, 679, 703},
 {703, 703, -679}, {703, 703, 679}, {707, -970, 707}, {707, 707, -970},
 {707, 707, 970}, {707, 970, 707}, {767, -350, 767}, {767, 350, 767}, {767, 767, -350},
 {767, 767, 350}, {791, -580, 791}, {791, 580, 791}, {791, 791, -580},
 {791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992},
 {833, 992, 833}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}
```

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1},
 {2, 1, -1}, {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5},
 {-7, -1, 4}, {-1, 1, 2}, {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1},
 {-1, 2, 2}, {-13, 5, 20}, {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}}
```

In[ ]:=

```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q[[i]].W[[k]] == 0,
   AppendTo[B', Q[[i]], Unevaluated[Sequence[]]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM[[j]].B[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], B[[l]] / GCD[Cross[MM[[j]], B[[l]][[1]],
      Cross[MM[[j]], B[[l]][[2]], Cross[MM[[j]], B[[l]][[3]]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM[[j]].MM[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], MM[[l]] / GCD[Cross[MM[[j]], MM[[l]][[1]],
      Cross[MM[[j]], MM[[l]][[2]], Cross[MM[[j]], MM[[l]][[3]]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[ ]=

```
{}
```

Out[ ]=

```
{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
 {-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
 {-1000, 821, 524}, {-1000, 916, 331}, ··· 93 313 ···, {1000, 524, 821},
 {1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
 {1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}
```

large output | show less | show more | show all | set si ze limit...

Out[ ]=

```
{{-89, 173, 351}, {-89, 351, 173}, {-71, 49, 191}, {-71, 191, 49}, {-5, 7, 17},
 {-5, 17, 7}, {-4, 59, 67}, {-4, 67, 59}, {-3, 68, 157}, {-3, 157, 68}, {-1, 1, 3},
 {-1, 3, 1}, {-1, 4, 15}, {-1, 8, 23}, {-1, 15, 4}, {-1, 23, 8}, {1, -7, 4}, {1, -1, 3},
 {1, 3, -1}, {1, 4, -7}, {1, 7, 7}, {3, -13, 8}, {3, 1, 1}, {3, 8, -13}, {4, -59, 67},
 {4, -7, 1}, {4, -1, 7}, {4, 1, -7}, {4, 1, 1}, {4, 1, 7}, {4, 7, -1}, {4, 7, 1},
 {4, 59, 67}, {4, 67, -59}, {4, 67, 59}, {5, -7, 17}, {5, 7, 17}, {5, 17, -7},
 {5, 17, 7}, {7, -17, 16}, {7, -5, 17}, {7, -1, 4}, {7, 4, -1}, {7, 16, -17},
 {7, 17, -5}, {7, 37, 43}, {7, 43, 37}, {8, -13, 3}, {8, -3, 13}, {8, 3, -13},
 {8, 3, 13}, {8, 13, -3}, {8, 13, 3}, {9, -151, 80}, {9, 80, -151}, {13, -35, 28},
 {13, -3, 8}, {13, 8, -3}, {13, 28, -35}, {17, -13, 53}, {17, 5, 7}, {17, 7, 5},
 {17, 53, -13}, {19, -107, 13}, {19, -23, 21}, {19, 13, -107}, {19, 21, -23},
 {21, -23, 19}, {21, -19, 23}, {21, 19, -23}, {21, 19, 23}, {21, 23, -19},
 {21, 23, 19}, {23, -103, 29}, {23, -19, 21}, {23, 21, -19}, {23, 29, -103},
 {49, -71, 191}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409}, {59, -4, 67},
 {59, 67, -4}, {59, 83, 248}, {59, 248, 83}, {67, 4, 59}, {67, 43, 256}, {67, 59, 4},
 {67, 256, 43}, {71, -49, 191}, {71, 49, 191}, {71, 191, -49}, {71, 191, 49},
 {80, -151, 9}, {80, -9, 151}, {80, 9, -151}, {80, 9, 151}, {80, 151, -9}, {80, 151, 9},
 {89, -173, 351}, {89, 173, 351}, {89, 351, -173}, {89, 351, 173}, {117, -61, 379},
 {117, 379, -61}, {151, -329, 364}, {151, -9, 80}, {151, 80, -9}, {151, 364, -329},
 {173, -89, 351}, {173, 351, -89}, {173, 707, 959}, {173, 959, 707}, {191, -235, 551},
 {191, 49, 71}, {191, 71, 49}, {191, 551, -235}, {257, -791, 524}, {257, 524, -791},
 {351, 89, 173}, {351, 173, 89}, {524, -791, 257}, {524, -257, 791}, {524, 257, -791},
 {524, 257, 791}, {524, 791, -257}, {524, 791, 257}, {791, -257, 524}, {791, 524, -257}}
```

Out[ ]=

```
{{-89, 173, 351}, {-89, 351, 173}, {-71, 49, 191}, {-71, 191, 49}, {-5, 7, 17},
 {-5, 17, 7}, {-4, 59, 67}, {-4, 67, 59}, {-3, 68, 157}, {-3, 157, 68}, {-1, 1, 3},
 {-1, 3, 1}, {-1, 4, 15}, {-1, 8, 23}, {-1, 15, 4}, {-1, 23, 8}, {0, 0, 1}, {0, 1, -1},
 {0, 1, 0}, {0, 1, 1}, {1, -140, 1}, {1, -22, 1}, {1, -19, 1}, {1, -14, 1}, {1, -8, 1},
 {1, -7, 4}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1}, {1, -1, 3},
 {1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8},
 {1, 1, -5}, {1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1},
 {1, 1, 2}, {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19},
 {1, 1, 22}, {1, 1, 140}, {1, 2, 1}, {1, 3, -1}, {1, 3, 1}, {1, 4, -7}, {1, 4, 1},
```

```
{1, 5, 1}, {1, 7, 7}, {1, 8, 1}, {1, 14, 1}, {1, 19, 1}, {1, 22, 1}, {1, 140, 1},
{2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2}, {2, 2, -17}, {2, 2, -5}, {2, 2, -1},
{2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2}, {2, 17, 2}, {3, -13, 8}, {3, -2, 3},
{3, 1, 1}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {3, 8, -13}, {4, -155, 4}, {4, -59, 67},
{4, -7, 1}, {4, -7, 4}, {4, -1, 4}, {4, -1, 7}, {4, 1, -7}, {4, 1, 1}, {4, 1, 4},
{4, 1, 7}, {4, 4, -155}, {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7}, {4, 4, 155},
{4, 7, -1}, {4, 7, 1}, {4, 7, 4}, {4, 59, 67}, {4, 67, -59}, {4, 67, 59}, {4, 155, 4},
{5, -268, 5}, {5, -29, 5}, {5, -26, 5}, {5, -7, 5}, {5, -7, 17}, {5, -4, 5},
{5, -2, 5}, {5, 2, 5}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29}, {5, 5, -26}, {5, 5, -7},
{5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7}, {5, 5, 26}, {5, 5, 29},
{5, 5, 268}, {5, 7, 5}, {5, 7, 17}, {5, 17, -7}, {5, 17, 7}, {5, 26, 5}, {5, 29, 5},
{5, 268, 5}, {6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6}, {7, -109, 7}, {7, -89, 7},
{7, -17, 16}, {7, -12, 7}, {7, -10, 7}, {7, -8, 7}, {7, -5, 17}, {7, -1, 4},
{7, -1, 7}, {7, 1, 7}, {7, 4, -1}, {7, 7, -109}, {7, 7, -89}, {7, 7, -12}, {7, 7, -10},
{7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8}, {7, 7, 10}, {7, 7, 12}, {7, 7, 89},
{7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7}, {7, 16, -17}, {7, 17, -5}, {7, 37, 43},
{7, 43, 37}, {7, 89, 7}, {7, 109, 7}, {8, -695, 8}, {8, -31, 8}, {8, -13, 3},
{8, -13, 8}, {8, -3, 13}, {8, 3, -13}, {8, 3, 13}, {8, 8, -695}, {8, 8, -31},
{8, 8, -13}, {8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, -3}, {8, 13, 3}, {8, 13, 8},
{8, 31, 8}, {8, 695, 8}, {9, -151, 80}, {9, -50, 9}, {9, 9, -50}, {9, 9, 50},
{9, 50, 9}, {9, 80, -151}, {10, -23, 10}, {10, 10, -23}, {10, 10, 23}, {10, 23, 10},
{11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1}, {13, -43, 13}, {13, -38, 13},
{13, -35, 28}, {13, -16, 13}, {13, -5, 13}, {13, -3, 8}, {13, 5, 13}, {13, 8, -3},
{13, 13, -43}, {13, 13, -38}, {13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16},
{13, 13, 38}, {13, 13, 43}, {13, 16, 13}, {13, 28, -35}, {13, 38, 13}, {13, 43, 13},
{14, -97, 14}, {14, 14, -97}, {14, 14, 97}, {14, 97, 14}, {16, -59, 16}, {16, 16, -59},
{16, 16, 59}, {16, 59, 16}, {17, -112, 17}, {17, -40, 17}, {17, -13, 53},
{17, -4, 17}, {17, 4, 17}, {17, 5, 7}, {17, 7, 5}, {17, 17, -112}, {17, 17, -40},
{17, 17, -4}, {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17}, {17, 53, -13},
{17, 112, 17}, {19, -107, 13}, {19, -68, 19}, {19, -23, 21}, {19, -13, 19},
{19, -2, 19}, {19, 2, 19}, {19, 13, -107}, {19, 13, 19}, {19, 19, -68}, {19, 19, -13},
{19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 21, -23}, {19, 68, 19},
{20, -17, 20}, {20, 17, 20}, {20, 20, -17}, {20, 20, 17}, {21, -23, 19}, {21, -19, 23},
{21, 19, -23}, {21, 19, 23}, {21, 23, -19}, {21, 23, 19}, {22, -241, 22},
{22, 22, -241}, {22, 22, 241}, {22, 241, 22}, {23, -168, 23}, {23, -103, 29},
{23, -74, 23}, {23, -47, 23}, {23, -20, 23}, {23, -19, 21}, {23, 20, 23},
{23, 21, -19}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47}, {23, 23, -20},
{23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 29, -103}, {23, 47, 23},
{23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25}, {25, 25, -64},
{25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {29, -10, 29}, {29, 10, 29},
{29, 29, -10}, {29, 29, 10}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16}, {31, 31, 16},
{32, -25, 32}, {32, 25, 32}, {32, 32, -25}, {32, 32, 25}, {34, -41, 34}, {34, -19, 34},
{34, 19, 34}, {34, 34, -41}, {34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34},
{37, -23, 37}, {37, 23, 37}, {37, 37, -23}, {37, 37, 23}, {38, -359, 38},
```

{38, 38, -359}, {38, 38, 359}, {38, 359, 38}, {41, -416, 41}, {41, -68, 41},
{41, 41, -416}, {41, 41, -68}, {41, 41, 68}, {41, 41, 416}, {41, 68, 41}, {41, 416, 41},
{43, -91, 43}, {43, -26, 43}, {43, 26, 43}, {43, 43, -91}, {43, 43, -26},
{43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47}, {47, 47, -46},
{47, 47, 46}, {49, -106, 49}, {49, -71, 191}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409}, {53, -886, 53},
{53, -49, 53}, {53, 49, 53}, {53, 53, -886}, {53, 53, -49}, {53, 53, 49},
{53, 53, 886}, {53, 886, 53}, {56, -17, 56}, {56, 17, 56}, {56, 56, -17}, {56, 56, 17},
{59, -32, 59}, {59, -4, 67}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32}, {59, 67, -4},
{59, 83, 248}, {59, 248, 83}, {61, -370, 61}, {61, -191, 61}, {61, 61, -370},
{61, 61, -191}, {61, 61, 191}, {61, 61, 370}, {61, 191, 61}, {61, 370, 61},
{67, 4, 59}, {67, 43, 256}, {67, 59, 4}, {67, 256, 43}, {68, -281, 68}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, -49, 191}, {71, 49, 191}, {71, 71, -139}, {71, 71, 139},
{71, 139, 71}, {71, 191, -49}, {71, 191, 49}, {73, -95, 73}, {73, 73, -95},
{73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559}, {74, 74, 559},
{74, 559, 74}, {80, -151, 9}, {80, -9, 151}, {80, 9, -151}, {80, 9, 151},
{80, 151, -9}, {80, 151, 9}, {82, -103, 82}, {82, 82, -103}, {82, 82, 103},
{82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125}, {83, 125, 83},
{84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23}, {89, -173, 351},
{89, -14, 89}, {89, 14, 89}, {89, 89, -14}, {89, 89, 14}, {89, 173, 351},
{89, 351, -173}, {89, 351, 173}, {91, -86, 91}, {91, 86, 91}, {91, 91, -86},
{91, 91, 86}, {95, -232, 95}, {95, -146, 95}, {95, 95, -232}, {95, 95, -146},
{95, 95, 146}, {95, 95, 232}, {95, 146, 95}, {95, 232, 95}, {97, -28, 97},
{97, 28, 97}, {97, 97, -28}, {97, 97, 28}, {103, -164, 103}, {103, 103, -164},
{103, 103, 164}, {103, 164, 103}, {107, -145, 107}, {107, 107, -145}, {107, 107, 145},
{107, 145, 107}, {109, -14, 109}, {109, 14, 109}, {109, 109, -14}, {109, 109, 14},
{116, -95, 116}, {116, 95, 116}, {116, 116, -95}, {116, 116, 95}, {117, -61, 379},
{117, 379, -61}, {124, -541, 124}, {124, -431, 124}, {124, 124, -541},
{124, 124, -431}, {124, 124, 431}, {124, 124, 541}, {124, 431, 124}, {124, 541, 124},
{125, -166, 125}, {125, 125, -166}, {125, 125, 166}, {125, 166, 125}, {130, -313, 130},
{130, 130, -313}, {130, 130, 313}, {130, 313, 130}, {134, -5, 134}, {134, 5, 134},
{134, 134, -5}, {134, 134, 5}, {137, -422, 137}, {137, 137, -422}, {137, 137, 422},
{137, 422, 137}, {139, -628, 139}, {139, -263, 139}, {139, -142, 139},
{139, 139, -628}, {139, 139, -263}, {139, 139, -142}, {139, 139, 142},
{139, 139, 263}, {139, 139, 628}, {139, 142, 139}, {139, 263, 139}, {139, 628, 139},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -329, 364},
{151, -163, 151}, {151, -9, 80}, {151, 80, -9}, {151, 151, -163}, {151, 151, 163},
{151, 163, 151}, {151, 364, -329}, {155, -8, 155}, {155, 8, 155}, {155, 155, -8},
{155, 155, 8}, {163, -302, 163}, {163, 163, -302}, {163, 163, 302}, {163, 302, 163},
{167, -457, 167}, {167, 167, -457}, {167, 167, 457}, {167, 457, 167},
{173, -89, 351}, {173, 351, -89}, {173, 707, 959}, {173, 959, 707}, {175, -767, 175},
{175, 175, -767}, {175, 175, 767}, {175, 767, 175}, {185, -61, 185}, {185, 61, 185},

{185, 185, -61}, {185, 185, 61}, {191, -235, 551}, {191, -122, 191}, {191, 49, 71},
{191, 71, 49}, {191, 122, 191}, {191, 191, -122}, {191, 191, 122}, {191, 551, -235},
{197, -526, 197}, {197, 197, -526}, {197, 197, 526}, {197, 526, 197}, {208, -41, 208},
{208, 41, 208}, {208, 208, -41}, {208, 208, 41}, {211, -137, 211}, {211, 137, 211},
{211, 211, -137}, {211, 211, 137}, {221, -932, 221}, {221, 221, -932},
{221, 221, 932}, {221, 932, 221}, {229, -237, 229}, {229, 229, -237}, {229, 229, 237},
{229, 237, 229}, {237, -458, 237}, {237, 237, -458}, {237, 237, 458},
{237, 458, 237}, {241, -44, 241}, {241, 44, 241}, {241, 241, -44}, {241, 241, 44},
{257, -791, 524}, {257, 524, -791}, {263, -278, 263}, {263, -197, 263},
{263, 197, 263}, {263, 263, -278}, {263, 263, -197}, {263, 263, 197}, {263, 263, 278},
{263, 278, 263}, {281, -136, 281}, {281, 136, 281}, {281, 281, -136}, {281, 281, 136},
{283, -794, 283}, {283, 283, -794}, {283, 283, 794}, {283, 794, 283}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307}, {307, 307, -679},
{307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313}, {313, 313, -260},
{313, 313, 260}, {314, -139, 314}, {314, 139, 314}, {314, 314, -139}, {314, 314, 139},
{329, -920, 329}, {329, 329, -920}, {329, 329, 920}, {329, 920, 329}, {349, -145, 349},
{349, 145, 349}, {349, 349, -145}, {349, 349, 145}, {351, 89, 173}, {351, 173, 89},
{359, -76, 359}, {359, 76, 359}, {359, 359, -76}, {359, 359, 76}, {397, -283, 397},
{397, 283, 397}, {397, 397, -283}, {397, 397, 283}, {431, -248, 431}, {431, 248, 431},
{431, 431, -248}, {431, 431, 248}, {443, -53, 443}, {443, 53, 443}, {443, 443, -53},
{443, 443, 53}, {457, -334, 457}, {457, 334, 457}, {457, 457, -334}, {457, 457, 334},
{460, -329, 460}, {460, 329, 460}, {460, 460, -329}, {460, 460, 329}, {466, -221, 466},
{466, 221, 466}, {466, 466, -221}, {466, 466, 221}, {485, -707, 485}, {485, 485, -707},
{485, 485, 707}, {485, 707, 485}, {494, -553, 494}, {494, 494, -553}, {494, 494, 553},
{494, 553, 494}, {496, -833, 496}, {496, 496, -833}, {496, 496, 833}, {496, 833, 496},
{524, -791, 257}, {524, -257, 791}, {524, 257, -791}, {524, 257, 791},
{524, 791, -257}, {524, 791, 257}, {541, -248, 541}, {541, 248, 541},
{541, 541, -248}, {541, 541, 248}, {553, -988, 553}, {553, 553, -988},
{553, 553, 988}, {553, 988, 553}, {559, -148, 559}, {559, 148, 559}, {559, 559, -148},
{559, 559, 148}, {665, -293, 665}, {665, 293, 665}, {665, 665, -293}, {665, 665, 293},
{679, -614, 679}, {679, 614, 679}, {679, 679, -614}, {679, 679, 614}, {680, -511, 680},
{680, 511, 680}, {680, 680, -511}, {680, 680, 511}, {695, -16, 695}, {695, 16, 695},
{695, 695, -16}, {695, 695, 16}, {703, -679, 703}, {703, 679, 703}, {703, 703, -679},
{703, 703, 679}, {707, -970, 707}, {707, 707, -970}, {707, 707, 970}, {707, 970, 707},
{767, -350, 767}, {767, 350, 767}, {767, 767, -350}, {767, 767, 350}, {791, -580, 791},
{791, -257, 524}, {791, 524, -257}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992},
{833, 992, 833}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1}, {2, 1, -1},
 {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5}, {-7, -1, 4}, {-1, 1, 2},
 {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1}, {-1, 2, 2}, {-13, 5, 20},
 {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}, {23, 14, 1}, {-23, -1, -14},
 {-7, 2, -1}, {7, 1, -2}, {7, 4, 1}, {-3, 3, -2}, {-2, 13, -5}, {3, 2, -3},
 {-7, -1, -4}, {2, 5, -13}, {151, 34, 1}, {-151, -1, -34}, {-3, 3, 2},
 {-13, 2, 5}, {-2, 1, 1}, {3, -2, -3}, {13, -5, -2}, {1, -1, -2}, {1, -2, -1},
 {35, 14, -19}, {-35, 19, -14}, {-41, 9, 30}, {5, -2, -13}, {-5, 13, 2},
 {41, -30, -9}, {-2, -1, 1}, {2, -1, 1}, {-2, 7, 1}, {-14, 19, 13}, {130, 13, -83},
 {-30, 41, 9}, {14, -13, -19}, {-130, 83, -13}, {30, -9, -41}, {-119, 31, 94},
 {-9, 41, 30}, {9, -30, -41}, {119, -94, -31}, {-130, -13, 83}, {-9, 30, 41},
 {130, -83, 13}, {9, -41, -30}, {-37, 29, 76}, {37, -76, -29}, {41, -9, -30},
 {-119, 94, 31}, {-41, 30, 9}, {119, -31, -94}, {-30, 9, 41}, {30, -41, -9}}
```

In[ ]:=

```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q[[i]].W[[k]] == 0,
   AppendTo[B', Q[[i]], Unevaluated[Sequence[]]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM[[j]].B[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], B[[l]] / GCD[Cross[MM[[j]], B[[l]][[1]],
      Cross[MM[[j]], B[[l]][[2]], Cross[MM[[j]], B[[l]][[3]]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM[[j]].MM[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], MM[[l]] / GCD[Cross[MM[[j]], MM[[l]][[1]],
      Cross[MM[[j]], MM[[l]][[2]], Cross[MM[[j]], MM[[l]][[3]]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[ ]=

```
{}
```

Out[ ]=

{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
{-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
{-1000, 821, 524}, {-1000, 916, 331}, ··· 93 184 ···, {1000, 524, 821},
{1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
{1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}

large output | show less | show more | show all | set si | ze limit...

Out[ ]=

{{-119, 171, 343}, {-119, 343, 171}, {-109, 1, 179}, {-109, 179, 1}, {-91, 123, 371},
{-91, 371, 123}, {-75, 101, 116}, {-75, 116, 101}, {-41, 47, 64}, {-41, 64, 47},
{-19, 3, 31}, {-19, 31, 3}, {1, -8, 89}, {1, 89, -8}, {3, -19, 31}, {3, 1, -1},
{3, 31, -19}, {4, -1, 15}, {5, -171, 4}, {5, 4, -171}, {8, -1, 23}, {9, -17, 31},
{9, 31, -17}, {13, 19, -107}, {16, 7, -17}, {28, -59, 61}, {28, 13, -35},
{28, 61, -59}, {29, 7, 21}, {29, 21, 7}, {29, 23, -103}, {31, -101, 181},
{31, 181, -101}, {43, 7, 37}, {53, 17, -13}, {59, -109, 169}, {59, 169, -109},
{64, -105, 119}, {64, 119, -105}, {68, -3, 157}, {76, 19, 43}, {76, 43, 19},
{144, 25, 89}, {144, 89, 25}, {161, 29, 131}, {161, 131, 29}, {248, 59, 83},
{256, 67, 43}, {257, -131, 279}, {257, 279, -131}, {289, -79, 267}, {289, 267, -79},
{364, 151, -329}, {379, 117, -61}, {409, 49, 475}, {421, -728, 509}, {421, 509, -728},
{452, -241, 839}, {452, 839, -241}, {461, -784, 373}, {461, 373, -784},
{551, 191, -235}, {556, -137, 799}, {556, 799, -137}, {959, 173, 707}}

Out[ ]=

{{-119, 171, 343}, {-119, 343, 171}, {-109, 1, 179}, {-109, 179, 1}, {-91, 123, 371},
{-91, 371, 123}, {-89, 173, 351}, {-89, 351, 173}, {-75, 101, 116}, {-75, 116, 101},
{-71, 49, 191}, {-71, 191, 49}, {-41, 47, 64}, {-41, 64, 47}, {-19, 3, 31},
{-19, 31, 3}, {-5, 7, 17}, {-5, 17, 7}, {-4, 59, 67}, {-4, 67, 59}, {-3, 68, 157},
{-3, 157, 68}, {-1, 1, 3}, {-1, 3, 1}, {-1, 4, 15}, {-1, 8, 23}, {-1, 15, 4},
{-1, 23, 8}, {0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1}, {1, -140, 1}, {1, -22, 1},
{1, -19, 1}, {1, -14, 1}, {1, -8, 1}, {1, -8, 89}, {1, -7, 4}, {1, -5, 1}, {1, -4, 1},
{1, -3, 1}, {1, -2, 1}, {1, -1, 1}, {1, -1, 3}, {1, 0, 1}, {1, 1, -140}, {1, 1, -22},
{1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5}, {1, 1, -4}, {1, 1, -3}, {1, 1, -2},
{1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2}, {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8},
{1, 1, 14}, {1, 1, 19}, {1, 1, 22}, {1, 1, 140}, {1, 2, 1}, {1, 3, -1}, {1, 3, 1},
{1, 4, -7}, {1, 4, 1}, {1, 5, 1}, {1, 7, 7}, {1, 8, 1}, {1, 14, 1}, {1, 19, 1},
{1, 22, 1}, {1, 89, -8}, {1, 140, 1}, {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2},
{2, 2, -17}, {2, 2, -5}, {2, 2, -1}, {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2},
{2, 17, 2}, {3, -19, 31}, {3, -13, 8}, {3, -2, 3}, {3, 1, -1}, {3, 1, 1}, {3, 2, 3},
{3, 3, -2}, {3, 3, 2}, {3, 8, -13}, {3, 31, -19}, {4, -155, 4}, {4, -59, 67},
{4, -7, 1}, {4, -7, 4}, {4, -1, 4}, {4, -1, 7}, {4, -1, 15}, {4, 1, -7}, {4, 1, 1},
{4, 1, 4}, {4, 1, 7}, {4, 4, -155}, {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7},
{4, 4, 155}, {4, 7, -1}, {4, 7, 1}, {4, 7, 4}, {4, 59, 67}, {4, 67, -59}, {4, 67, 59},

{4, 155, 4}, {5, -268, 5}, {5, -171, 4}, {5, -29, 5}, {5, -26, 5}, {5, -7, 5},
{5, -7, 17}, {5, -4, 5}, {5, -2, 5}, {5, 2, 5}, {5, 4, -171}, {5, 4, 5}, {5, 5, -268},
{5, 5, -29}, {5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4},
{5, 5, 7}, {5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 7, 17}, {5, 17, -7},
{5, 17, 7}, {5, 26, 5}, {5, 29, 5}, {5, 268, 5}, {6, -7, 6}, {6, 6, -7}, {6, 6, 7},
{6, 7, 6}, {7, -109, 7}, {7, -89, 7}, {7, -17, 16}, {7, -12, 7}, {7, -10, 7},
{7, -8, 7}, {7, -5, 17}, {7, -1, 4}, {7, -1, 7}, {7, 1, 7}, {7, 4, -1}, {7, 7, -109},
{7, 7, -89}, {7, 7, -12}, {7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8},
{7, 7, 10}, {7, 7, 12}, {7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7},
{7, 16, -17}, {7, 17, -5}, {7, 37, 43}, {7, 43, 37}, {7, 89, 7}, {7, 109, 7},
{8, -695, 8}, {8, -31, 8}, {8, -13, 3}, {8, -13, 8}, {8, -3, 13}, {8, -1, 23},
{8, 3, -13}, {8, 3, 13}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13}, {8, 8, 13},
{8, 8, 31}, {8, 8, 695}, {8, 13, -3}, {8, 13, 3}, {8, 13, 8}, {8, 31, 8}, {8, 695, 8},
{9, -151, 80}, {9, -50, 9}, {9, -17, 31}, {9, 9, -50}, {9, 9, 50}, {9, 31, -17},
{9, 50, 9}, {9, 80, -151}, {10, -23, 10}, {10, 10, -23}, {10, 10, 23}, {10, 23, 10},
{11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1}, {13, -43, 13}, {13, -38, 13},
{13, -35, 28}, {13, -16, 13}, {13, -5, 13}, {13, -3, 8}, {13, 5, 13}, {13, 8, -3},
{13, 13, -43}, {13, 13, -38}, {13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16},
{13, 13, 38}, {13, 13, 43}, {13, 16, 13}, {13, 19, -107}, {13, 28, -35}, {13, 38, 13},
{13, 43, 13}, {14, -97, 14}, {14, 14, -97}, {14, 14, 97}, {14, 97, 14}, {16, -59, 16},
{16, 7, -17}, {16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {17, -112, 17}, {17, -40, 17},
{17, -13, 53}, {17, -4, 17}, {17, 4, 17}, {17, 5, 7}, {17, 7, 5}, {17, 17, -112},
{17, 17, -40}, {17, 17, -4}, {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17},
{17, 53, -13}, {17, 112, 17}, {19, -107, 13}, {19, -68, 19}, {19, -23, 21},
{19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, -107}, {19, 13, 19}, {19, 19, -68},
{19, 19, -13}, {19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 21, -23},
{19, 68, 19}, {20, -17, 20}, {20, 17, 20}, {20, 20, -17}, {20, 20, 17}, {21, -23, 19},
{21, -19, 23}, {21, 19, -23}, {21, 19, 23}, {21, 23, -19}, {21, 23, 19},
{22, -241, 22}, {22, 22, -241}, {22, 22, 241}, {22, 241, 22}, {23, -168, 23},
{23, -103, 29}, {23, -74, 23}, {23, -47, 23}, {23, -20, 23}, {23, -19, 21},
{23, 20, 23}, {23, 21, -19}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 29, -103},
{23, 47, 23}, {23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25},
{25, 25, -64}, {25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {28, -59, 61},
{28, 13, -35}, {28, 61, -59}, {29, -10, 29}, {29, 7, 21}, {29, 10, 29}, {29, 21, 7},
{29, 23, -103}, {29, 29, -10}, {29, 29, 10}, {31, -101, 181}, {31, -16, 31},
{31, 16, 31}, {31, 31, -16}, {31, 31, 16}, {31, 181, -101}, {32, -25, 32},
{32, 25, 32}, {32, 32, -25}, {32, 32, 25}, {34, -41, 34}, {34, -19, 34},
{34, 19, 34}, {34, 34, -41}, {34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34},
{37, -23, 37}, {37, 23, 37}, {37, 37, -23}, {37, 37, 23}, {38, -359, 38},
{38, 38, -359}, {38, 38, 359}, {38, 359, 38}, {41, -416, 41}, {41, -68, 41},
{41, 41, -416}, {41, 41, -68}, {41, 41, 68}, {41, 41, 416}, {41, 68, 41},
{41, 416, 41}, {43, -91, 43}, {43, -26, 43}, {43, 7, 37}, {43, 26, 43}, {43, 43, -91},
{43, 43, -26}, {43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47},

{47, 47, -46}, {47, 47, 46}, {49, -106, 49}, {49, -71, 191}, {49, 49, -106},
{49, 49, 106}, {49, 106, 49}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409},
{53, -886, 53}, {53, -49, 53}, {53, 17, -13}, {53, 49, 53}, {53, 53, -886},
{53, 53, -49}, {53, 53, 49}, {53, 53, 886}, {53, 886, 53}, {56, -17, 56},
{56, 17, 56}, {56, 56, -17}, {56, 56, 17}, {59, -109, 169}, {59, -32, 59},
{59, -4, 67}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32}, {59, 67, -4}, {59, 83, 248},
{59, 169, -109}, {59, 248, 83}, {61, -370, 61}, {61, -191, 61}, {61, 61, -370},
{61, 61, -191}, {61, 61, 191}, {61, 61, 370}, {61, 191, 61}, {61, 370, 61},
{64, -105, 119}, {64, 119, -105}, {67, 4, 59}, {67, 43, 256}, {67, 59, 4},
{67, 256, 43}, {68, -281, 68}, {68, -3, 157}, {68, 68, -281}, {68, 68, 281},
{68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1}, {71, -139, 71},
{71, -49, 191}, {71, 49, 191}, {71, 71, -139}, {71, 71, 139}, {71, 139, 71},
{71, 191, -49}, {71, 191, 49}, {73, -95, 73}, {73, 73, -95}, {73, 73, 95},
{73, 95, 73}, {74, -559, 74}, {74, 74, -559}, {74, 74, 559}, {74, 559, 74},
{76, 19, 43}, {76, 43, 19}, {80, -151, 9}, {80, -9, 151}, {80, 9, -151}, {80, 9, 151},
{80, 151, -9}, {80, 151, 9}, {82, -103, 82}, {82, 82, -103}, {82, 82, 103},
{82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125}, {83, 125, 83},
{84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23}, {89, -173, 351},
{89, -14, 89}, {89, 14, 89}, {89, 89, -14}, {89, 89, 14}, {89, 173, 351},
{89, 351, -173}, {89, 351, 173}, {91, -86, 91}, {91, 86, 91}, {91, 91, -86},
{91, 91, 86}, {95, -232, 95}, {95, -146, 95}, {95, 95, -232}, {95, 95, -146},
{95, 95, 146}, {95, 95, 232}, {95, 146, 95}, {95, 232, 95}, {97, -28, 97}, {97, 28, 97},
{97, 97, -28}, {97, 97, 28}, {103, -164, 103}, {103, 103, -164}, {103, 103, 164},
{103, 164, 103}, {107, -145, 107}, {107, 107, -145}, {107, 107, 145}, {107, 145, 107},
{109, -14, 109}, {109, 14, 109}, {109, 109, -14}, {109, 109, 14}, {116, -95, 116},
{116, 95, 116}, {116, 116, -95}, {116, 116, 95}, {117, -61, 379}, {117, 379, -61},
{124, -541, 124}, {124, -431, 124}, {124, 124, -541}, {124, 124, -431},
{124, 124, 431}, {124, 124, 541}, {124, 431, 124}, {124, 541, 124}, {125, -166, 125},
{125, 125, -166}, {125, 125, 166}, {125, 166, 125}, {130, -313, 130}, {130, 130, -313},
{130, 130, 313}, {130, 313, 130}, {134, -5, 134}, {134, 5, 134}, {134, 134, -5},
{134, 134, 5}, {137, -422, 137}, {137, 137, -422}, {137, 137, 422}, {137, 422, 137},
{139, -628, 139}, {139, -263, 139}, {139, -142, 139}, {139, 139, -628},
{139, 139, -263}, {139, 139, -142}, {139, 139, 142}, {139, 139, 263}, {139, 139, 628},
{139, 142, 139}, {139, 263, 139}, {139, 628, 139}, {144, 25, 89}, {144, 89, 25},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -329, 364},
{151, -163, 151}, {151, -9, 80}, {151, 80, -9}, {151, 151, -163}, {151, 151, 163},
{151, 163, 151}, {151, 364, -329}, {155, -8, 155}, {155, 8, 155}, {155, 155, -8},
{155, 155, 8}, {161, 29, 131}, {161, 131, 29}, {163, -302, 163}, {163, 163, -302},
{163, 163, 302}, {163, 302, 163}, {167, -457, 167}, {167, 167, -457}, {167, 167, 457},
{167, 457, 167}, {173, -89, 351}, {173, 351, -89}, {173, 707, 959}, {173, 959, 707},
{175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175},
{185, -61, 185}, {185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -235, 551},
{191, -122, 191}, {191, 49, 71}, {191, 71, 49}, {191, 122, 191}, {191, 191, -122},

{191, 191, 122}, {191, 551, -235}, {197, -526, 197}, {197, 197, -526},
{197, 197, 526}, {197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41},
{208, 208, 41}, {211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137},
{221, -932, 221}, {221, 221, -932}, {221, 221, 932}, {221, 932, 221}, {229, -237, 229},
{229, 229, -237}, {229, 229, 237}, {229, 237, 229}, {237, -458, 237},
{237, 237, -458}, {237, 237, 458}, {237, 458, 237}, {241, -44, 241}, {241, 44, 241},
{241, 241, -44}, {241, 241, 44}, {248, 59, 83}, {256, 67, 43}, {257, -791, 524},
{257, -131, 279}, {257, 279, -131}, {257, 524, -791}, {263, -278, 263},
{263, -197, 263}, {263, 197, 263}, {263, 263, -278}, {263, 263, -197},
{263, 263, 197}, {263, 263, 278}, {263, 278, 263}, {281, -136, 281}, {281, 136, 281},
{281, 281, -136}, {281, 281, 136}, {283, -794, 283}, {283, 283, -794},
{283, 283, 794}, {283, 794, 283}, {289, -79, 267}, {289, 267, -79}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307},
{307, 307, -679}, {307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313},
{313, 313, -260}, {313, 313, 260}, {314, -139, 314}, {314, 139, 314},
{314, 314, -139}, {314, 314, 139}, {329, -920, 329}, {329, 329, -920},
{329, 329, 920}, {329, 920, 329}, {349, -145, 349}, {349, 145, 349}, {349, 349, -145},
{349, 349, 145}, {351, 89, 173}, {351, 173, 89}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {364, 151, -329}, {379, 117, -61}, {397, -283, 397},
{397, 283, 397}, {397, 397, -283}, {397, 397, 283}, {409, 49, 475}, {421, -728, 509},
{421, 509, -728}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248}, {431, 431, 248},
{443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53}, {452, -241, 839},
{452, 839, -241}, {457, -334, 457}, {457, 334, 457}, {457, 457, -334},
{457, 457, 334}, {460, -329, 460}, {460, 329, 460}, {460, 460, -329}, {460, 460, 329},
{461, -784, 373}, {461, 373, -784}, {466, -221, 466}, {466, 221, 466},
{466, 466, -221}, {466, 466, 221}, {485, -707, 485}, {485, 485, -707},
{485, 485, 707}, {485, 707, 485}, {494, -553, 494}, {494, 494, -553}, {494, 494, 553},
{494, 553, 494}, {496, -833, 496}, {496, 496, -833}, {496, 496, 833}, {496, 833, 496},
{524, -791, 257}, {524, -257, 791}, {524, 257, -791}, {524, 257, 791},
{524, 791, -257}, {524, 791, 257}, {541, -248, 541}, {541, 248, 541},
{541, 541, -248}, {541, 541, 248}, {551, 191, -235}, {553, -988, 553},
{553, 553, -988}, {553, 553, 988}, {553, 988, 553}, {556, -137, 799},
{556, 799, -137}, {559, -148, 559}, {559, 148, 559}, {559, 559, -148},
{559, 559, 148}, {665, -293, 665}, {665, 293, 665}, {665, 665, -293}, {665, 665, 293},
{679, -614, 679}, {679, 614, 679}, {679, 679, -614}, {679, 679, 614}, {680, -511, 680},
{680, 511, 680}, {680, 680, -511}, {680, 680, 511}, {695, -16, 695}, {695, 16, 695},
{695, 695, -16}, {695, 695, 16}, {703, -679, 703}, {703, 679, 703}, {703, 703, -679},
{703, 703, 679}, {707, -970, 707}, {707, 707, -970}, {707, 707, 970}, {707, 970, 707},
{767, -350, 767}, {767, 350, 767}, {767, 767, -350}, {767, 767, 350}, {791, -580, 791},
{791, -257, 524}, {791, 524, -257}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992}, {833, 992, 833},
{959, 173, 707}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1}, {2, 1, -1},
 {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5}, {-7, -1, 4}, {-1, 1, 2},
 {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1}, {-1, 2, 2}, {-13, 5, 20},
 {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}, {23, 14, 1}, {-23, -1, -14},
 {-7, 2, -1}, {7, 1, -2}, {7, 4, 1}, {-3, 3, -2}, {-2, 13, -5}, {3, 2, -3},
 {-7, -1, -4}, {2, 5, -13}, {151, 34, 1}, {-151, -1, -34}, {-3, 3, 2},
 {-13, 2, 5}, {-2, 1, 1}, {3, -2, -3}, {13, -5, -2}, {1, -1, -2}, {1, -2, -1},
 {35, 14, -19}, {-35, 19, -14}, {-41, 9, 30}, {5, -2, -13}, {-5, 13, 2},
 {41, -30, -9}, {-2, -1, 1}, {2, -1, 1}, {-2, 7, 1}, {-14, 19, 13}, {130, 13, -83},
 {-30, 41, 9}, {14, -13, -19}, {-130, 83, -13}, {30, -9, -41}, {-119, 31, 94},
 {-9, 41, 30}, {9, -30, -41}, {119, -94, -31}, {-130, -13, 83}, {-9, 30, 41},
 {130, -83, 13}, {9, -41, -30}, {-37, 29, 76}, {37, -76, -29}, {41, -9, -30},
 {-119, 94, 31}, {-41, 30, 9}, {119, -31, -94}, {-30, 9, 41}, {30, -41, -9},
 {23, 1, 14}, {-23, -14, -1}, {127, 50, 73}, {-83, 115, -62}, {-127, -73, -50},
 {83, 62, -115}, {-115, 83, 62}, {2, -3, 3}, {-1, -4, -7}, {5, -13, 2}, {2, -7, -1},
 {115, -62, -83}, {-26, 1, 7}, {-139, 34, 59}, {139, -59, -34}, {-14, 13, 19},
 {14, -19, -13}, {-21, 45, 14}, {21, -14, -45}, {247, -92, 49}, {-7, -34, -73}}
```

In[ ]:=

```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q⟦i⟧.W⟦k⟧ == 0,
   AppendTo[B', Q⟦i⟧], Unevaluated[Sequence[]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM⟦j⟧.B⟦l⟧ == 0,
   AppendTo[W, Cross[MM⟦j⟧, B⟦l⟧] / GCD[Cross[MM⟦j⟧, B⟦l⟧]⟦1⟧,
      Cross[MM⟦j⟧, B⟦l⟧]⟦2⟧, Cross[MM⟦j⟧, B⟦l⟧]⟦3⟧]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM⟦j⟧.MM⟦l⟧ == 0,
   AppendTo[W, Cross[MM⟦j⟧, MM⟦l⟧] / GCD[Cross[MM⟦j⟧, MM⟦l⟧]⟦1⟧,
      Cross[MM⟦j⟧, MM⟦l⟧]⟦2⟧, Cross[MM⟦j⟧, MM⟦l⟧]⟦3⟧]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[ ]=

```
{}
```

Out[ ]=

```
{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
 {-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
 {-1000, 821, 524}, {-1000, 916, 331}, ··· 93 119 ···, {1000, 524, 821},
 {1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
 {1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}
```

large output | show less | show more | show all | set si ze limit...

Out[ ]=

```
{{-509, 64, 19}, {-263, 52, 1}, {7, -21, 29}, {8, -79, 41}, {9, 17, 31}, {12, -157, 67},
 {13, 401, -9}, {16, 73, 49}, {19, 97, -47}, {28, 147, 83}, {29, -21, 7},
 {29, 397, 51}, {43, -107, 175}, {53, 83, 185}, {61, 565, -269}, {113, 112, -63},
 {161, 188, -103}, {248, -139, 941}, {256, 13, 949}, {469, -395, 139}}
```

Out[ ]=

```
{{-509, 64, 19}, {-263, 52, 1}, {-119, 171, 343}, {-119, 343, 171}, {-109, 1, 179},
 {-109, 179, 1}, {-91, 123, 371}, {-91, 371, 123}, {-89, 173, 351}, {-89, 351, 173},
 {-75, 101, 116}, {-75, 116, 101}, {-71, 49, 191}, {-71, 191, 49}, {-41, 47, 64},
 {-41, 64, 47}, {-19, 3, 31}, {-19, 31, 3}, {-5, 7, 17}, {-5, 17, 7}, {-4, 59, 67},
 {-4, 67, 59}, {-3, 68, 157}, {-3, 157, 68}, {-1, 1, 3}, {-1, 3, 1}, {-1, 4, 15},
 {-1, 8, 23}, {-1, 15, 4}, {-1, 23, 8}, {0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1},
 {1, -140, 1}, {1, -22, 1}, {1, -19, 1}, {1, -14, 1}, {1, -8, 1}, {1, -8, 89},
 {1, -7, 4}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1}, {1, -1, 3},
 {1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5},
 {1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2},
 {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19}, {1, 1, 22},
 {1, 1, 140}, {1, 2, 1}, {1, 3, -1}, {1, 3, 1}, {1, 4, -7}, {1, 4, 1}, {1, 5, 1},
 {1, 7, 7}, {1, 8, 1}, {1, 14, 1}, {1, 19, 1}, {1, 22, 1}, {1, 89, -8}, {1, 140, 1},
 {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2}, {2, 2, -17}, {2, 2, -5}, {2, 2, -1},
 {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2}, {2, 17, 2}, {3, -19, 31}, {3, -13, 8},
 {3, -2, 3}, {3, 1, -1}, {3, 1, 1}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {3, 8, -13},
 {3, 31, -19}, {4, -155, 4}, {4, -59, 67}, {4, -7, 1}, {4, -7, 4}, {4, -1, 4},
 {4, -1, 7}, {4, -1, 15}, {4, 1, -7}, {4, 1, 1}, {4, 1, 4}, {4, 1, 7}, {4, 4, -155},
 {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7}, {4, 4, 155}, {4, 7, -1}, {4, 7, 1},
 {4, 7, 4}, {4, 59, 67}, {4, 67, -59}, {4, 67, 59}, {4, 155, 4}, {5, -268, 5},
 {5, -171, 4}, {5, -29, 5}, {5, -26, 5}, {5, -7, 5}, {5, -7, 17}, {5, -4, 5},
 {5, -2, 5}, {5, 2, 5}, {5, 4, -171}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29},
 {5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7},
 {5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 7, 17}, {5, 17, -7}, {5, 17, 7},
 {5, 26, 5}, {5, 29, 5}, {5, 268, 5}, {6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6},
 {7, -109, 7}, {7, -89, 7}, {7, -21, 29}, {7, -17, 16}, {7, -12, 7}, {7, -10, 7},
 {7, -8, 7}, {7, -5, 17}, {7, -1, 4}, {7, -1, 7}, {7, 1, 7}, {7, 4, -1}, {7, 7, -109},
 {7, 7, -89}, {7, 7, -12}, {7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8},
```

{7, 7, 10}, {7, 7, 12}, {7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7},
{7, 16, -17}, {7, 17, -5}, {7, 37, 43}, {7, 43, 37}, {7, 89, 7}, {7, 109, 7},
{8, -695, 8}, {8, -79, 41}, {8, -31, 8}, {8, -13, 3}, {8, -13, 8}, {8, -3, 13},
{8, -1, 23}, {8, 3, -13}, {8, 3, 13}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13},
{8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, -3}, {8, 13, 3}, {8, 13, 8}, {8, 31, 8},
{8, 695, 8}, {9, -151, 80}, {9, -50, 9}, {9, -17, 31}, {9, 9, -50}, {9, 9, 50},
{9, 17, 31}, {9, 31, -17}, {9, 50, 9}, {9, 80, -151}, {10, -23, 10}, {10, 10, -23},
{10, 10, 23}, {10, 23, 10}, {11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1},
{12, -157, 67}, {13, -43, 13}, {13, -38, 13}, {13, -35, 28}, {13, -16, 13},
{13, -5, 13}, {13, -3, 8}, {13, 5, 13}, {13, 8, -3}, {13, 13, -43}, {13, 13, -38},
{13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16}, {13, 13, 38}, {13, 13, 43},
{13, 16, 13}, {13, 19, -107}, {13, 28, -35}, {13, 38, 13}, {13, 43, 13}, {13, 401, -9},
{14, -97, 14}, {14, 14, -97}, {14, 14, 97}, {14, 97, 14}, {16, -59, 16}, {16, 7, -17},
{16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {16, 73, 49}, {17, -112, 17}, {17, -40, 17},
{17, -13, 53}, {17, -4, 17}, {17, 4, 17}, {17, 5, 7}, {17, 7, 5}, {17, 17, -112},
{17, 17, -40}, {17, 17, -4}, {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17},
{17, 53, -13}, {17, 112, 17}, {19, -107, 13}, {19, -68, 19}, {19, -23, 21},
{19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, -107}, {19, 13, 19}, {19, 19, -68},
{19, 19, -13}, {19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 21, -23},
{19, 68, 19}, {19, 97, -47}, {20, -17, 20}, {20, 17, 20}, {20, 20, -17}, {20, 20, 17},
{21, -23, 19}, {21, -19, 23}, {21, 19, -23}, {21, 19, 23}, {21, 23, -19}, {21, 23, 19},
{22, -241, 22}, {22, 22, -241}, {22, 22, 241}, {22, 241, 22}, {23, -168, 23},
{23, -103, 29}, {23, -74, 23}, {23, -47, 23}, {23, -20, 23}, {23, -19, 21},
{23, 20, 23}, {23, 21, -19}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 29, -103},
{23, 47, 23}, {23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25},
{25, 25, -64}, {25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {28, -59, 61},
{28, 13, -35}, {28, 61, -59}, {28, 147, 83}, {29, -21, 7}, {29, -10, 29},
{29, 7, 21}, {29, 10, 29}, {29, 21, 7}, {29, 23, -103}, {29, 29, -10}, {29, 29, 10},
{29, 397, 51}, {31, -101, 181}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16},
{31, 31, 16}, {31, 181, -101}, {32, -25, 32}, {32, 25, 32}, {32, 32, -25},
{32, 32, 25}, {34, -41, 34}, {34, -19, 34}, {34, 19, 34}, {34, 34, -41},
{34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34}, {37, -23, 37}, {37, 23, 37},
{37, 37, -23}, {37, 37, 23}, {38, -359, 38}, {38, 38, -359}, {38, 38, 359},
{38, 359, 38}, {41, -416, 41}, {41, -68, 41}, {41, 41, -416}, {41, 41, -68},
{41, 41, 68}, {41, 41, 416}, {41, 68, 41}, {41, 416, 41}, {43, -107, 175},
{43, -91, 43}, {43, -26, 43}, {43, 7, 37}, {43, 26, 43}, {43, 43, -91}, {43, 43, -26},
{43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47}, {47, 47, -46},
{47, 47, 46}, {49, -106, 49}, {49, -71, 191}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409}, {53, -886, 53},
{53, -49, 53}, {53, 17, -13}, {53, 49, 53}, {53, 53, -886}, {53, 53, -49},
{53, 53, 49}, {53, 53, 886}, {53, 83, 185}, {53, 886, 53}, {56, -17, 56},
{56, 17, 56}, {56, 56, -17}, {56, 56, 17}, {59, -109, 169}, {59, -32, 59},
{59, -4, 67}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32}, {59, 67, -4}, {59, 83, 248},

{59, 169, -109}, {59, 248, 83}, {61, -370, 61}, {61, -191, 61}, {61, 61, -370},
{61, 61, -191}, {61, 61, 191}, {61, 61, 370}, {61, 191, 61}, {61, 370, 61},
{61, 565, -269}, {64, -105, 119}, {64, 119, -105}, {67, 4, 59}, {67, 43, 256},
{67, 59, 4}, {67, 256, 43}, {68, -281, 68}, {68, -3, 157}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, -49, 191}, {71, 49, 191}, {71, 71, -139}, {71, 71, 139},
{71, 139, 71}, {71, 191, -49}, {71, 191, 49}, {73, -95, 73}, {73, 73, -95},
{73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559}, {74, 74, 559},
{74, 559, 74}, {76, 19, 43}, {76, 43, 19}, {80, -151, 9}, {80, -9, 151}, {80, 9, -151},
{80, 9, 151}, {80, 151, -9}, {80, 151, 9}, {82, -103, 82}, {82, 82, -103},
{82, 82, 103}, {82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125},
{83, 125, 83}, {84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23},
{89, -173, 351}, {89, -14, 89}, {89, 14, 89}, {89, 89, -14}, {89, 89, 14},
{89, 173, 351}, {89, 351, -173}, {89, 351, 173}, {91, -86, 91}, {91, 86, 91},
{91, 91, -86}, {91, 91, 86}, {95, -232, 95}, {95, -146, 95}, {95, 95, -232},
{95, 95, -146}, {95, 95, 146}, {95, 95, 232}, {95, 146, 95}, {95, 232, 95},
{97, -28, 97}, {97, 28, 97}, {97, 97, -28}, {97, 97, 28}, {103, -164, 103},
{103, 103, -164}, {103, 103, 164}, {103, 164, 103}, {107, -145, 107},
{107, 107, -145}, {107, 107, 145}, {107, 145, 107}, {109, -14, 109}, {109, 14, 109},
{109, 109, -14}, {109, 109, 14}, {113, 112, -63}, {116, -95, 116}, {116, 95, 116},
{116, 116, -95}, {116, 116, 95}, {117, -61, 379}, {117, 379, -61}, {124, -541, 124},
{124, -431, 124}, {124, 124, -541}, {124, 124, -431}, {124, 124, 431},
{124, 124, 541}, {124, 431, 124}, {124, 541, 124}, {125, -166, 125}, {125, 125, -166},
{125, 125, 166}, {125, 166, 125}, {130, -313, 130}, {130, 130, -313},
{130, 130, 313}, {130, 313, 130}, {134, -5, 134}, {134, 5, 134}, {134, 134, -5},
{134, 134, 5}, {137, -422, 137}, {137, 137, -422}, {137, 137, 422}, {137, 422, 137},
{139, -628, 139}, {139, -263, 139}, {139, -142, 139}, {139, 139, -628},
{139, 139, -263}, {139, 139, -142}, {139, 139, 142}, {139, 139, 263}, {139, 139, 628},
{139, 142, 139}, {139, 263, 139}, {139, 628, 139}, {144, 25, 89}, {144, 89, 25},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -329, 364},
{151, -163, 151}, {151, -9, 80}, {151, 80, -9}, {151, 151, -163}, {151, 151, 163},
{151, 163, 151}, {151, 364, -329}, {155, -8, 155}, {155, 8, 155}, {155, 155, -8},
{155, 155, 8}, {161, 29, 131}, {161, 131, 29}, {161, 188, -103}, {163, -302, 163},
{163, 163, -302}, {163, 163, 302}, {163, 302, 163}, {167, -457, 167}, {167, 167, -457},
{167, 167, 457}, {167, 457, 167}, {173, -89, 351}, {173, 351, -89}, {173, 707, 959},
{173, 959, 707}, {175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175},
{185, -61, 185}, {185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -235, 551},
{191, -122, 191}, {191, 49, 71}, {191, 71, 49}, {191, 122, 191}, {191, 191, -122},
{191, 191, 122}, {191, 551, -235}, {197, -526, 197}, {197, 197, -526}, {197, 197, 526},
{197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41}, {208, 208, 41},
{211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137}, {221, -932, 221},
{221, 221, -932}, {221, 221, 932}, {221, 932, 221}, {229, -237, 229}, {229, 229, -237},
{229, 229, 237}, {229, 237, 229}, {237, -458, 237}, {237, 237, -458}, {237, 237, 458},

{237, 458, 237}, {241, -44, 241}, {241, 44, 241}, {241, 241, -44}, {241, 241, 44},
{248, -139, 941}, {248, 59, 83}, {256, 13, 949}, {256, 67, 43}, {257, -791, 524},
{257, -131, 279}, {257, 279, -131}, {257, 524, -791}, {263, -278, 263},
{263, -197, 263}, {263, 197, 263}, {263, 263, -278}, {263, 263, -197},
{263, 263, 197}, {263, 263, 278}, {263, 278, 263}, {281, -136, 281}, {281, 136, 281},
{281, 281, -136}, {281, 281, 136}, {283, -794, 283}, {283, 283, -794},
{283, 283, 794}, {283, 794, 283}, {289, -79, 267}, {289, 267, -79}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307},
{307, 307, -679}, {307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313},
{313, 313, -260}, {313, 313, 260}, {314, -139, 314}, {314, 139, 314},
{314, 314, -139}, {314, 314, 139}, {329, -920, 329}, {329, 329, -920},
{329, 329, 920}, {329, 920, 329}, {349, -145, 349}, {349, 145, 349}, {349, 349, -145},
{349, 349, 145}, {351, 89, 173}, {351, 173, 89}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {364, 151, -329}, {379, 117, -61}, {397, -283, 397},
{397, 283, 397}, {397, 397, -283}, {397, 397, 283}, {409, 49, 475}, {421, -728, 509},
{421, 509, -728}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248},
{431, 431, 248}, {443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53},
{452, -241, 839}, {452, 839, -241}, {457, -334, 457}, {457, 334, 457},
{457, 457, -334}, {457, 457, 334}, {460, -329, 460}, {460, 329, 460},
{460, 460, -329}, {460, 460, 329}, {461, -784, 373}, {461, 373, -784},
{466, -221, 466}, {466, 221, 466}, {466, 466, -221}, {466, 466, 221},
{469, -395, 139}, {485, -707, 485}, {485, 485, -707}, {485, 485, 707},
{485, 707, 485}, {494, -553, 494}, {494, 494, -553}, {494, 494, 553}, {494, 553, 494},
{496, -833, 496}, {496, 496, -833}, {496, 496, 833}, {496, 833, 496}, {524, -791, 257},
{524, -257, 791}, {524, 257, -791}, {524, 257, 791}, {524, 791, -257},
{524, 791, 257}, {541, -248, 541}, {541, 248, 541}, {541, 541, -248}, {541, 541, 248},
{551, 191, -235}, {553, -988, 553}, {553, 553, -988}, {553, 553, 988},
{553, 988, 553}, {556, -137, 799}, {556, 799, -137}, {559, -148, 559},
{559, 148, 559}, {559, 559, -148}, {559, 559, 148}, {665, -293, 665}, {665, 293, 665},
{665, 665, -293}, {665, 665, 293}, {679, -614, 679}, {679, 614, 679},
{679, 679, -614}, {679, 679, 614}, {680, -511, 680}, {680, 511, 680},
{680, 680, -511}, {680, 680, 511}, {695, -16, 695}, {695, 16, 695}, {695, 695, -16},
{695, 695, 16}, {703, -679, 703}, {703, 679, 703}, {703, 703, -679}, {703, 703, 679},
{707, -970, 707}, {707, 707, -970}, {707, 707, 970}, {707, 970, 707}, {767, -350, 767},
{767, 350, 767}, {767, 767, -350}, {767, 767, 350}, {791, -580, 791},
{791, -257, 524}, {791, 524, -257}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992}, {833, 992, 833},
{959, 173, 707}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1}, {2, 1, -1},
 {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5}, {-7, -1, 4}, {-1, 1, 2},
 {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1}, {-1, 2, 2}, {-13, 5, 20},
 {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}, {23, 14, 1}, {-23, -1, -14}, {-7, 2, -1},
 {7, 1, -2}, {7, 4, 1}, {-3, 3, -2}, {-2, 13, -5}, {3, 2, -3}, {-7, -1, -4},
 {2, 5, -13}, {151, 34, 1}, {-151, -1, -34}, {-3, 3, 2}, {-13, 2, 5}, {-2, 1, 1},
 {3, -2, -3}, {13, -5, -2}, {1, -1, -2}, {1, -2, -1}, {35, 14, -19}, {-35, 19, -14},
 {-41, 9, 30}, {5, -2, -13}, {-5, 13, 2}, {41, -30, -9}, {-2, -1, 1}, {2, -1, 1},
 {-2, 7, 1}, {-14, 19, 13}, {130, 13, -83}, {-30, 41, 9}, {14, -13, -19},
 {-130, 83, -13}, {30, -9, -41}, {-119, 31, 94}, {-9, 41, 30}, {9, -30, -41},
 {119, -94, -31}, {-130, -13, 83}, {-9, 30, 41}, {130, -83, 13}, {9, -41, -30},
 {-37, 29, 76}, {37, -76, -29}, {41, -9, -30}, {-119, 94, 31}, {-41, 30, 9},
 {119, -31, -94}, {-30, 9, 41}, {30, -41, -9}, {23, 1, 14}, {-23, -14, -1},
 {127, 50, 73}, {-83, 115, -62}, {-127, -73, -50}, {83, 62, -115}, {-115, 83, 62},
 {2, -3, 3}, {-1, -4, -7}, {5, -13, 2}, {2, -7, -1}, {115, -62, -83}, {-26, 1, 7},
 {-139, 34, 59}, {139, -59, -34}, {-14, 13, 19}, {14, -19, -13}, {-21, 45, 14},
 {21, -14, -45}, {247, -92, 49}, {-7, -34, -73}, {-45, 14, 21}, {26, -1, -7},
 {139, 34, -59}, {325, -194, -269}, {119, 281, 350}, {-21, -14, 45}, {7, 34, 73}}
```

In[ ]:=

```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q[[i]].W[[k]] == 0,
   AppendTo[B', Q[[i]], Unevaluated[Sequence[]]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM[[j]].B[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], B[[l]] / GCD[Cross[MM[[j]], B[[l]][[1]],
      Cross[MM[[j]], B[[l]][[2]], Cross[MM[[j]], B[[l]][[3]]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM[[j]].MM[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], MM[[l]] / GCD[Cross[MM[[j]], MM[[l]][[1]],
      Cross[MM[[j]], MM[[l]][[2]], Cross[MM[[j]], MM[[l]][[3]]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[ ]=

```
{}
```

Out[ ]=

```
{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
 {-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
 {-1000, 821, 524}, {-1000, 916, 331}, ··· 93 099 ···, {1000, 524, 821},
 {1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
 {1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}
```

large output | show less | show more | show all | set si | ze limit...

Out[ ]=

```
{}
```

Out[ ]=

```
{{-509, 64, 19}, {-263, 52, 1}, {-119, 171, 343}, {-119, 343, 171}, {-109, 1, 179},
 {-109, 179, 1}, {-91, 123, 371}, {-91, 371, 123}, {-89, 173, 351}, {-89, 351, 173},
 {-75, 101, 116}, {-75, 116, 101}, {-71, 49, 191}, {-71, 191, 49}, {-41, 47, 64},
 {-41, 64, 47}, {-19, 3, 31}, {-19, 31, 3}, {-5, 7, 17}, {-5, 17, 7}, {-4, 59, 67},
 {-4, 67, 59}, {-3, 68, 157}, {-3, 157, 68}, {-1, 1, 3}, {-1, 3, 1}, {-1, 4, 15},
 {-1, 8, 23}, {-1, 15, 4}, {-1, 23, 8}, {0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1},
 {1, -140, 1}, {1, -22, 1}, {1, -19, 1}, {1, -14, 1}, {1, -8, 1}, {1, -8, 89},
 {1, -7, 4}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1}, {1, -1, 3},
 {1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5},
 {1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2},
 {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19}, {1, 1, 22},
 {1, 1, 140}, {1, 2, 1}, {1, 3, -1}, {1, 3, 1}, {1, 4, -7}, {1, 4, 1}, {1, 5, 1},
 {1, 7, 7}, {1, 8, 1}, {1, 14, 1}, {1, 19, 1}, {1, 22, 1}, {1, 89, -8}, {1, 140, 1},
 {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2}, {2, 2, -17}, {2, 2, -5}, {2, 2, -1},
 {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2}, {2, 17, 2}, {3, -19, 31}, {3, -13, 8},
 {3, -2, 3}, {3, 1, -1}, {3, 1, 1}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {3, 8, -13},
 {3, 31, -19}, {4, -155, 4}, {4, -59, 67}, {4, -7, 1}, {4, -7, 4}, {4, -1, 4},
 {4, -1, 7}, {4, -1, 15}, {4, 1, -7}, {4, 1, 1}, {4, 1, 4}, {4, 1, 7}, {4, 4, -155},
 {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7}, {4, 4, 155}, {4, 7, -1}, {4, 7, 1},
 {4, 7, 4}, {4, 59, 67}, {4, 67, -59}, {4, 67, 59}, {4, 155, 4}, {5, -268, 5},
 {5, -171, 4}, {5, -29, 5}, {5, -26, 5}, {5, -7, 5}, {5, -7, 17}, {5, -4, 5},
 {5, -2, 5}, {5, 2, 5}, {5, 4, -171}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29},
 {5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7},
 {5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 7, 17}, {5, 17, -7}, {5, 17, 7},
 {5, 26, 5}, {5, 29, 5}, {5, 268, 5}, {6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6},
 {7, -109, 7}, {7, -89, 7}, {7, -21, 29}, {7, -17, 16}, {7, -12, 7}, {7, -10, 7},
 {7, -8, 7}, {7, -5, 17}, {7, -1, 4}, {7, -1, 7}, {7, 1, 7}, {7, 4, -1}, {7, 7, -109},
 {7, 7, -89}, {7, 7, -12}, {7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8},
 {7, 7, 10}, {7, 7, 12}, {7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7},
 {7, 16, -17}, {7, 17, -5}, {7, 37, 43}, {7, 43, 37}, {7, 89, 7}, {7, 109, 7},
 {8, -695, 8}, {8, -79, 41}, {8, -31, 8}, {8, -13, 3}, {8, -13, 8}, {8, -3, 13},
```

{8, -1, 23}, {8, 3, -13}, {8, 3, 13}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13},
{8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, -3}, {8, 13, 3}, {8, 13, 8}, {8, 31, 8},
{8, 695, 8}, {9, -151, 80}, {9, -50, 9}, {9, -17, 31}, {9, 9, -50}, {9, 9, 50},
{9, 17, 31}, {9, 31, -17}, {9, 50, 9}, {9, 80, -151}, {10, -23, 10}, {10, 10, -23},
{10, 10, 23}, {10, 23, 10}, {11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1},
{12, -157, 67}, {13, -43, 13}, {13, -38, 13}, {13, -35, 28}, {13, -16, 13},
{13, -5, 13}, {13, -3, 8}, {13, 5, 13}, {13, 8, -3}, {13, 13, -43}, {13, 13, -38},
{13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16}, {13, 13, 38}, {13, 13, 43},
{13, 16, 13}, {13, 19, -107}, {13, 28, -35}, {13, 38, 13}, {13, 43, 13}, {13, 401, -9},
{14, -97, 14}, {14, 14, -97}, {14, 14, 97}, {14, 97, 14}, {16, -59, 16}, {16, 7, -17},
{16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {16, 73, 49}, {17, -112, 17}, {17, -40, 17},
{17, -13, 53}, {17, -4, 17}, {17, 4, 17}, {17, 5, 7}, {17, 7, 5}, {17, 17, -112},
{17, 17, -40}, {17, 17, -4}, {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17},
{17, 53, -13}, {17, 112, 17}, {19, -107, 13}, {19, -68, 19}, {19, -23, 21},
{19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, -107}, {19, 13, 19}, {19, 19, -68},
{19, 19, -13}, {19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 21, -23},
{19, 68, 19}, {19, 97, -47}, {20, -17, 20}, {20, 17, 20}, {20, 20, -17}, {20, 20, 17},
{21, -23, 19}, {21, -19, 23}, {21, 19, -23}, {21, 19, 23}, {21, 23, -19}, {21, 23, 19},
{22, -241, 22}, {22, 22, -241}, {22, 22, 241}, {22, 241, 22}, {23, -168, 23},
{23, -103, 29}, {23, -74, 23}, {23, -47, 23}, {23, -20, 23}, {23, -19, 21},
{23, 20, 23}, {23, 21, -19}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 29, -103},
{23, 47, 23}, {23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25},
{25, 25, -64}, {25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {28, -59, 61},
{28, 13, -35}, {28, 61, -59}, {28, 147, 83}, {29, -21, 7}, {29, -10, 29},
{29, 7, 21}, {29, 10, 29}, {29, 21, 7}, {29, 23, -103}, {29, 29, -10}, {29, 29, 10},
{29, 397, 51}, {31, -101, 181}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16},
{31, 31, 16}, {31, 181, -101}, {32, -25, 32}, {32, 25, 32}, {32, 32, -25},
{32, 32, 25}, {34, -41, 34}, {34, -19, 34}, {34, 19, 34}, {34, 34, -41},
{34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34}, {37, -23, 37}, {37, 23, 37},
{37, 37, -23}, {37, 37, 23}, {38, -359, 38}, {38, 38, -359}, {38, 38, 359},
{38, 359, 38}, {41, -416, 41}, {41, -68, 41}, {41, 41, -416}, {41, 41, -68},
{41, 41, 68}, {41, 41, 416}, {41, 68, 41}, {41, 416, 41}, {43, -107, 175},
{43, -91, 43}, {43, -26, 43}, {43, 7, 37}, {43, 26, 43}, {43, 43, -91}, {43, 43, -26},
{43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47}, {47, 47, -46},
{47, 47, 46}, {49, -106, 49}, {49, -71, 191}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409}, {53, -886, 53},
{53, -49, 53}, {53, 17, -13}, {53, 49, 53}, {53, 53, -886}, {53, 53, -49},
{53, 53, 49}, {53, 53, 886}, {53, 83, 185}, {53, 886, 53}, {56, -17, 56},
{56, 17, 56}, {56, 56, -17}, {56, 56, 17}, {59, -109, 169}, {59, -32, 59},
{59, -4, 67}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32}, {59, 67, -4}, {59, 83, 248},
{59, 169, -109}, {59, 248, 83}, {61, -370, 61}, {61, -191, 61}, {61, 61, -370},
{61, 61, -191}, {61, 61, 191}, {61, 61, 370}, {61, 191, 61}, {61, 370, 61},
{61, 565, -269}, {64, -105, 119}, {64, 119, -105}, {67, 4, 59}, {67, 43, 256},

{67, 59, 4}, {67, 256, 43}, {68, -281, 68}, {68, -3, 157}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, -49, 191}, {71, 49, 191}, {71, 71, -139}, {71, 71, 139},
{71, 139, 71}, {71, 191, -49}, {71, 191, 49}, {73, -95, 73}, {73, 73, -95},
{73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559}, {74, 74, 559},
{74, 559, 74}, {76, 19, 43}, {76, 43, 19}, {80, -151, 9}, {80, -9, 151}, {80, 9, -151},
{80, 9, 151}, {80, 151, -9}, {80, 151, 9}, {82, -103, 82}, {82, 82, -103},
{82, 82, 103}, {82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125},
{83, 125, 83}, {84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23},
{89, -173, 351}, {89, -14, 89}, {89, 14, 89}, {89, 89, -14}, {89, 89, 14},
{89, 173, 351}, {89, 351, -173}, {89, 351, 173}, {91, -86, 91}, {91, 86, 91},
{91, 91, -86}, {91, 91, 86}, {95, -232, 95}, {95, -146, 95}, {95, 95, -232},
{95, 95, -146}, {95, 95, 146}, {95, 95, 232}, {95, 146, 95}, {95, 232, 95},
{97, -28, 97}, {97, 28, 97}, {97, 97, -28}, {97, 97, 28}, {103, -164, 103},
{103, 103, -164}, {103, 103, 164}, {103, 164, 103}, {107, -145, 107},
{107, 107, -145}, {107, 107, 145}, {107, 145, 107}, {109, -14, 109}, {109, 14, 109},
{109, 109, -14}, {109, 109, 14}, {113, 112, -63}, {116, -95, 116}, {116, 95, 116},
{116, 116, -95}, {116, 116, 95}, {117, -61, 379}, {117, 379, -61}, {124, -541, 124},
{124, -431, 124}, {124, 124, -541}, {124, 124, -431}, {124, 124, 431},
{124, 124, 541}, {124, 431, 124}, {124, 541, 124}, {125, -166, 125}, {125, 125, -166},
{125, 125, 166}, {125, 166, 125}, {130, -313, 130}, {130, 130, -313},
{130, 130, 313}, {130, 313, 130}, {134, -5, 134}, {134, 5, 134}, {134, 134, -5},
{134, 134, 5}, {137, -422, 137}, {137, 137, -422}, {137, 137, 422}, {137, 422, 137},
{139, -628, 139}, {139, -263, 139}, {139, -142, 139}, {139, 139, -628},
{139, 139, -263}, {139, 139, -142}, {139, 139, 142}, {139, 139, 263}, {139, 139, 628},
{139, 142, 139}, {139, 263, 139}, {139, 628, 139}, {144, 25, 89}, {144, 89, 25},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -329, 364},
{151, -163, 151}, {151, -9, 80}, {151, 80, -9}, {151, 151, -163}, {151, 151, 163},
{151, 163, 151}, {151, 364, -329}, {155, -8, 155}, {155, 8, 155}, {155, 155, -8},
{155, 155, 8}, {161, 29, 131}, {161, 131, 29}, {161, 188, -103}, {163, -302, 163},
{163, 163, -302}, {163, 163, 302}, {163, 302, 163}, {167, -457, 167}, {167, 167, -457},
{167, 167, 457}, {167, 457, 167}, {173, -89, 351}, {173, 351, -89}, {173, 707, 959},
{173, 959, 707}, {175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175},
{185, -61, 185}, {185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -235, 551},
{191, -122, 191}, {191, 49, 71}, {191, 71, 49}, {191, 122, 191}, {191, 191, -122},
{191, 191, 122}, {191, 551, -235}, {197, -526, 197}, {197, 197, -526}, {197, 197, 526},
{197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41}, {208, 208, 41},
{211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137}, {221, -932, 221},
{221, 221, -932}, {221, 221, 932}, {221, 932, 221}, {229, -237, 229}, {229, 229, -237},
{229, 229, 237}, {229, 237, 229}, {237, -458, 237}, {237, 237, -458}, {237, 237, 458},
{237, 458, 237}, {241, -44, 241}, {241, 44, 241}, {241, 241, -44}, {241, 241, 44},
{248, -139, 941}, {248, 59, 83}, {256, 13, 949}, {256, 67, 43}, {257, -791, 524},
{257, -131, 279}, {257, 279, -131}, {257, 524, -791}, {263, -278, 263},

```
{263, -197, 263}, {263, 197, 263}, {263, 263, -278}, {263, 263, -197},
{263, 263, 197}, {263, 263, 278}, {263, 278, 263}, {281, -136, 281}, {281, 136, 281},
{281, 281, -136}, {281, 281, 136}, {283, -794, 283}, {283, 283, -794},
{283, 283, 794}, {283, 794, 283}, {289, -79, 267}, {289, 267, -79}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307},
{307, 307, -679}, {307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313},
{313, 313, -260}, {313, 313, 260}, {314, -139, 314}, {314, 139, 314},
{314, 314, -139}, {314, 314, 139}, {329, -920, 329}, {329, 329, -920},
{329, 329, 920}, {329, 920, 329}, {349, -145, 349}, {349, 145, 349}, {349, 349, -145},
{349, 349, 145}, {351, 89, 173}, {351, 173, 89}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {364, 151, -329}, {379, 117, -61}, {397, -283, 397},
{397, 283, 397}, {397, 397, -283}, {397, 397, 283}, {409, 49, 475}, {421, -728, 509},
{421, 509, -728}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248},
{431, 431, 248}, {443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53},
{452, -241, 839}, {452, 839, -241}, {457, -334, 457}, {457, 334, 457},
{457, 457, -334}, {457, 457, 334}, {460, -329, 460}, {460, 329, 460},
{460, 460, -329}, {460, 460, 329}, {461, -784, 373}, {461, 373, -784},
{466, -221, 466}, {466, 221, 466}, {466, 466, -221}, {466, 466, 221},
{469, -395, 139}, {485, -707, 485}, {485, 485, -707}, {485, 485, 707},
{485, 707, 485}, {494, -553, 494}, {494, 494, -553}, {494, 494, 553}, {494, 553, 494},
{496, -833, 496}, {496, 496, -833}, {496, 496, 833}, {496, 833, 496}, {524, -791, 257},
{524, -257, 791}, {524, 257, -791}, {524, 257, 791}, {524, 791, -257},
{524, 791, 257}, {541, -248, 541}, {541, 248, 541}, {541, 541, -248}, {541, 541, 248},
{551, 191, -235}, {553, -988, 553}, {553, 553, -988}, {553, 553, 988},
{553, 988, 553}, {556, -137, 799}, {556, 799, -137}, {559, -148, 559},
{559, 148, 559}, {559, 559, -148}, {559, 559, 148}, {665, -293, 665}, {665, 293, 665},
{665, 665, -293}, {665, 665, 293}, {679, -614, 679}, {679, 614, 679},
{679, 679, -614}, {679, 679, 614}, {680, -511, 680}, {680, 511, 680},
{680, 680, -511}, {680, 680, 511}, {695, -16, 695}, {695, 16, 695}, {695, 695, -16},
{695, 695, 16}, {703, -679, 703}, {703, 679, 703}, {703, 703, -679}, {703, 703, 679},
{707, -970, 707}, {707, 707, -970}, {707, 707, 970}, {707, 970, 707}, {767, -350, 767},
{767, 350, 767}, {767, 767, -350}, {767, 767, 350}, {791, -580, 791},
{791, -257, 524}, {791, 524, -257}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992}, {833, 992, 833},
{959, 173, 707}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}
```

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1}, {2, 1, -1},
 {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5}, {-7, -1, 4}, {-1, 1, 2},
 {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1}, {-1, 2, 2}, {-13, 5, 20},
 {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}, {23, 14, 1}, {-23, -1, -14}, {-7, 2, -1},
 {7, 1, -2}, {7, 4, 1}, {-3, 3, -2}, {-2, 13, -5}, {3, 2, -3}, {-7, -1, -4},
 {2, 5, -13}, {151, 34, 1}, {-151, -1, -34}, {-3, 3, 2}, {-13, 2, 5}, {-2, 1, 1},
 {3, -2, -3}, {13, -5, -2}, {1, -1, -2}, {1, -2, -1}, {35, 14, -19}, {-35, 19, -14},
 {-41, 9, 30}, {5, -2, -13}, {-5, 13, 2}, {41, -30, -9}, {-2, -1, 1}, {2, -1, 1},
 {-2, 7, 1}, {-14, 19, 13}, {130, 13, -83}, {-30, 41, 9}, {14, -13, -19},
 {-130, 83, -13}, {30, -9, -41}, {-119, 31, 94}, {-9, 41, 30}, {9, -30, -41},
 {119, -94, -31}, {-130, -13, 83}, {-9, 30, 41}, {130, -83, 13}, {9, -41, -30},
 {-37, 29, 76}, {37, -76, -29}, {41, -9, -30}, {-119, 94, 31}, {-41, 30, 9},
 {119, -31, -94}, {-30, 9, 41}, {30, -41, -9}, {23, 1, 14}, {-23, -14, -1},
 {127, 50, 73}, {-83, 115, -62}, {-127, -73, -50}, {83, 62, -115}, {-115, 83, 62},
 {2, -3, 3}, {-1, -4, -7}, {5, -13, 2}, {2, -7, -1}, {115, -62, -83}, {-26, 1, 7},
 {-139, 34, 59}, {139, -59, -34}, {-14, 13, 19}, {14, -19, -13}, {-21, 45, 14},
 {21, -14, -45}, {247, -92, 49}, {-7, -34, -73}, {-45, 14, 21}, {26, -1, -7},
 {139, 34, -59}, {325, -194, -269}, {119, 281, 350}, {-21, -14, 45}, {7, 34, 73}}
```

In[ ]:=

```
B' = {}
Q = Complement[V, B]
For[i = 1, i ≤ Length[Q], i = i + 1,
 For[k = 1, k ≤ Length[W], k = k + 1,
  If[Q[[i]].W[[k]] == 0,
   AppendTo[B', Q[[i]], Unevaluated[Sequence[]]]]]]
MM = DeleteDuplicates[B']
B = Union[B, MM]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[B], l = l + 1,
  If[MM[[j]].B[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], B[[l]] / GCD[Cross[MM[[j]], B[[l]][[1]],
      Cross[MM[[j]], B[[l]][[2]], Cross[MM[[j]], B[[l]][[3]]], Unevaluated[Sequence[]]]]]
For[j = 1, j ≤ Length[MM], j = j + 1,
 For[l = j, l ≤ Length[MM], l = l + 1,
  If[MM[[j]].MM[[l]] == 0,
   AppendTo[W, Cross[MM[[j]], MM[[l]] / GCD[Cross[MM[[j]], MM[[l]][[1]],
      Cross[MM[[j]], MM[[l]][[2]], Cross[MM[[j]], MM[[l]][[3]]], Unevaluated[Sequence[]]]]]
W = DeleteDuplicates[W]
```

Out[ ]=

```
{}
```

Out[ ]=

```
{{-1000, 76, 971}, {-1000, 139, 964}, {-1000, 161, 400}, {-1000, 289, 320},
 {-1000, 320, 289}, {-1000, 331, 916}, {-1000, 400, 161}, {-1000, 524, 821},
 {-1000, 821, 524}, {-1000, 916, 331}, ··· 93 099 ···, {1000, 524, 821},
 {1000, 821, -524}, {1000, 821, 524}, {1000, 916, -331}, {1000, 916, 331},
 {1000, 964, -139}, {1000, 964, 139}, {1000, 971, -76}, {1000, 971, 76}}
```

large output | show less | show more | show all | set si ze limit...

Out[ ]=

```
{}
```

Out[ ]=

```
{{-509, 64, 19}, {-263, 52, 1}, {-119, 171, 343}, {-119, 343, 171}, {-109, 1, 179},
 {-109, 179, 1}, {-91, 123, 371}, {-91, 371, 123}, {-89, 173, 351}, {-89, 351, 173},
 {-75, 101, 116}, {-75, 116, 101}, {-71, 49, 191}, {-71, 191, 49}, {-41, 47, 64},
 {-41, 64, 47}, {-19, 3, 31}, {-19, 31, 3}, {-5, 7, 17}, {-5, 17, 7}, {-4, 59, 67},
 {-4, 67, 59}, {-3, 68, 157}, {-3, 157, 68}, {-1, 1, 3}, {-1, 3, 1}, {-1, 4, 15},
 {-1, 8, 23}, {-1, 15, 4}, {-1, 23, 8}, {0, 0, 1}, {0, 1, -1}, {0, 1, 0}, {0, 1, 1},
 {1, -140, 1}, {1, -22, 1}, {1, -19, 1}, {1, -14, 1}, {1, -8, 1}, {1, -8, 89},
 {1, -7, 4}, {1, -5, 1}, {1, -4, 1}, {1, -3, 1}, {1, -2, 1}, {1, -1, 1}, {1, -1, 3},
 {1, 0, 1}, {1, 1, -140}, {1, 1, -22}, {1, 1, -19}, {1, 1, -14}, {1, 1, -8}, {1, 1, -5},
 {1, 1, -4}, {1, 1, -3}, {1, 1, -2}, {1, 1, -1}, {1, 1, 0}, {1, 1, 1}, {1, 1, 2},
 {1, 1, 3}, {1, 1, 4}, {1, 1, 5}, {1, 1, 8}, {1, 1, 14}, {1, 1, 19}, {1, 1, 22},
 {1, 1, 140}, {1, 2, 1}, {1, 3, -1}, {1, 3, 1}, {1, 4, -7}, {1, 4, 1}, {1, 5, 1},
 {1, 7, 7}, {1, 8, 1}, {1, 14, 1}, {1, 19, 1}, {1, 22, 1}, {1, 89, -8}, {1, 140, 1},
 {2, -17, 2}, {2, -5, 2}, {2, -1, 2}, {2, 1, 2}, {2, 2, -17}, {2, 2, -5}, {2, 2, -1},
 {2, 2, 1}, {2, 2, 5}, {2, 2, 17}, {2, 5, 2}, {2, 17, 2}, {3, -19, 31}, {3, -13, 8},
 {3, -2, 3}, {3, 1, -1}, {3, 1, 1}, {3, 2, 3}, {3, 3, -2}, {3, 3, 2}, {3, 8, -13},
 {3, 31, -19}, {4, -155, 4}, {4, -59, 67}, {4, -7, 1}, {4, -7, 4}, {4, -1, 4},
 {4, -1, 7}, {4, -1, 15}, {4, 1, -7}, {4, 1, 1}, {4, 1, 4}, {4, 1, 7}, {4, 4, -155},
 {4, 4, -7}, {4, 4, -1}, {4, 4, 1}, {4, 4, 7}, {4, 4, 155}, {4, 7, -1}, {4, 7, 1},
 {4, 7, 4}, {4, 59, 67}, {4, 67, -59}, {4, 67, 59}, {4, 155, 4}, {5, -268, 5},
 {5, -171, 4}, {5, -29, 5}, {5, -26, 5}, {5, -7, 5}, {5, -7, 17}, {5, -4, 5},
 {5, -2, 5}, {5, 2, 5}, {5, 4, -171}, {5, 4, 5}, {5, 5, -268}, {5, 5, -29},
 {5, 5, -26}, {5, 5, -7}, {5, 5, -4}, {5, 5, -2}, {5, 5, 2}, {5, 5, 4}, {5, 5, 7},
 {5, 5, 26}, {5, 5, 29}, {5, 5, 268}, {5, 7, 5}, {5, 7, 17}, {5, 17, -7}, {5, 17, 7},
 {5, 26, 5}, {5, 29, 5}, {5, 268, 5}, {6, -7, 6}, {6, 6, -7}, {6, 6, 7}, {6, 7, 6},
 {7, -109, 7}, {7, -89, 7}, {7, -21, 29}, {7, -17, 16}, {7, -12, 7}, {7, -10, 7},
 {7, -8, 7}, {7, -5, 17}, {7, -1, 4}, {7, -1, 7}, {7, 1, 7}, {7, 4, -1}, {7, 7, -109},
 {7, 7, -89}, {7, 7, -12}, {7, 7, -10}, {7, 7, -8}, {7, 7, -1}, {7, 7, 1}, {7, 7, 8},
 {7, 7, 10}, {7, 7, 12}, {7, 7, 89}, {7, 7, 109}, {7, 8, 7}, {7, 10, 7}, {7, 12, 7},
 {7, 16, -17}, {7, 17, -5}, {7, 37, 43}, {7, 43, 37}, {7, 89, 7}, {7, 109, 7},
 {8, -695, 8}, {8, -79, 41}, {8, -31, 8}, {8, -13, 3}, {8, -13, 8}, {8, -3, 13},
```

{8, -1, 23}, {8, 3, -13}, {8, 3, 13}, {8, 8, -695}, {8, 8, -31}, {8, 8, -13},
{8, 8, 13}, {8, 8, 31}, {8, 8, 695}, {8, 13, -3}, {8, 13, 3}, {8, 13, 8}, {8, 31, 8},
{8, 695, 8}, {9, -151, 80}, {9, -50, 9}, {9, -17, 31}, {9, 9, -50}, {9, 9, 50},
{9, 17, 31}, {9, 31, -17}, {9, 50, 9}, {9, 80, -151}, {10, -23, 10}, {10, 10, -23},
{10, 10, 23}, {10, 23, 10}, {11, -1, 11}, {11, 1, 11}, {11, 11, -1}, {11, 11, 1},
{12, -157, 67}, {13, -43, 13}, {13, -38, 13}, {13, -35, 28}, {13, -16, 13},
{13, -5, 13}, {13, -3, 8}, {13, 5, 13}, {13, 8, -3}, {13, 13, -43}, {13, 13, -38},
{13, 13, -16}, {13, 13, -5}, {13, 13, 5}, {13, 13, 16}, {13, 13, 38}, {13, 13, 43},
{13, 16, 13}, {13, 19, -107}, {13, 28, -35}, {13, 38, 13}, {13, 43, 13}, {13, 401, -9},
{14, -97, 14}, {14, 14, -97}, {14, 14, 97}, {14, 97, 14}, {16, -59, 16}, {16, 7, -17},
{16, 16, -59}, {16, 16, 59}, {16, 59, 16}, {16, 73, 49}, {17, -112, 17}, {17, -40, 17},
{17, -13, 53}, {17, -4, 17}, {17, 4, 17}, {17, 5, 7}, {17, 7, 5}, {17, 17, -112},
{17, 17, -40}, {17, 17, -4}, {17, 17, 4}, {17, 17, 40}, {17, 17, 112}, {17, 40, 17},
{17, 53, -13}, {17, 112, 17}, {19, -107, 13}, {19, -68, 19}, {19, -23, 21},
{19, -13, 19}, {19, -2, 19}, {19, 2, 19}, {19, 13, -107}, {19, 13, 19}, {19, 19, -68},
{19, 19, -13}, {19, 19, -2}, {19, 19, 2}, {19, 19, 13}, {19, 19, 68}, {19, 21, -23},
{19, 68, 19}, {19, 97, -47}, {20, -17, 20}, {20, 17, 20}, {20, 20, -17}, {20, 20, 17},
{21, -23, 19}, {21, -19, 23}, {21, 19, -23}, {21, 19, 23}, {21, 23, -19}, {21, 23, 19},
{22, -241, 22}, {22, 22, -241}, {22, 22, 241}, {22, 241, 22}, {23, -168, 23},
{23, -103, 29}, {23, -74, 23}, {23, -47, 23}, {23, -20, 23}, {23, -19, 21},
{23, 20, 23}, {23, 21, -19}, {23, 23, -168}, {23, 23, -74}, {23, 23, -47},
{23, 23, -20}, {23, 23, 20}, {23, 23, 47}, {23, 23, 74}, {23, 23, 168}, {23, 29, -103},
{23, 47, 23}, {23, 74, 23}, {23, 168, 23}, {25, -64, 25}, {25, -9, 25}, {25, 9, 25},
{25, 25, -64}, {25, 25, -9}, {25, 25, 9}, {25, 25, 64}, {25, 64, 25}, {28, -59, 61},
{28, 13, -35}, {28, 61, -59}, {28, 147, 83}, {29, -21, 7}, {29, -10, 29},
{29, 7, 21}, {29, 10, 29}, {29, 21, 7}, {29, 23, -103}, {29, 29, -10}, {29, 29, 10},
{29, 397, 51}, {31, -101, 181}, {31, -16, 31}, {31, 16, 31}, {31, 31, -16},
{31, 31, 16}, {31, 181, -101}, {32, -25, 32}, {32, 25, 32}, {32, 32, -25},
{32, 32, 25}, {34, -41, 34}, {34, -19, 34}, {34, 19, 34}, {34, 34, -41},
{34, 34, -19}, {34, 34, 19}, {34, 34, 41}, {34, 41, 34}, {37, -23, 37}, {37, 23, 37},
{37, 37, -23}, {37, 37, 23}, {38, -359, 38}, {38, 38, -359}, {38, 38, 359},
{38, 359, 38}, {41, -416, 41}, {41, -68, 41}, {41, 41, -416}, {41, 41, -68},
{41, 41, 68}, {41, 41, 416}, {41, 68, 41}, {41, 416, 41}, {43, -107, 175},
{43, -91, 43}, {43, -26, 43}, {43, 7, 37}, {43, 26, 43}, {43, 43, -91}, {43, 43, -26},
{43, 43, 26}, {43, 43, 91}, {43, 91, 43}, {47, -46, 47}, {47, 46, 47}, {47, 47, -46},
{47, 47, 46}, {49, -106, 49}, {49, -71, 191}, {49, 49, -106}, {49, 49, 106},
{49, 106, 49}, {49, 191, -71}, {49, 409, 475}, {49, 475, 409}, {53, -886, 53},
{53, -49, 53}, {53, 17, -13}, {53, 49, 53}, {53, 53, -886}, {53, 53, -49},
{53, 53, 49}, {53, 53, 886}, {53, 83, 185}, {53, 886, 53}, {56, -17, 56},
{56, 17, 56}, {56, 56, -17}, {56, 56, 17}, {59, -109, 169}, {59, -32, 59},
{59, -4, 67}, {59, 32, 59}, {59, 59, -32}, {59, 59, 32}, {59, 67, -4}, {59, 83, 248},
{59, 169, -109}, {59, 248, 83}, {61, -370, 61}, {61, -191, 61}, {61, 61, -370},
{61, 61, -191}, {61, 61, 191}, {61, 61, 370}, {61, 191, 61}, {61, 370, 61},
{61, 565, -269}, {64, -105, 119}, {64, 119, -105}, {67, 4, 59}, {67, 43, 256},

{67, 59, 4}, {67, 256, 43}, {68, -281, 68}, {68, -3, 157}, {68, 68, -281},
{68, 68, 281}, {68, 281, 68}, {70, -1, 70}, {70, 1, 70}, {70, 70, -1}, {70, 70, 1},
{71, -139, 71}, {71, -49, 191}, {71, 49, 191}, {71, 71, -139}, {71, 71, 139},
{71, 139, 71}, {71, 191, -49}, {71, 191, 49}, {73, -95, 73}, {73, 73, -95},
{73, 73, 95}, {73, 95, 73}, {74, -559, 74}, {74, 74, -559}, {74, 74, 559},
{74, 559, 74}, {76, 19, 43}, {76, 43, 19}, {80, -151, 9}, {80, -9, 151}, {80, 9, -151},
{80, 9, 151}, {80, 151, -9}, {80, 151, 9}, {82, -103, 82}, {82, 82, -103},
{82, 82, 103}, {82, 103, 82}, {83, -125, 83}, {83, 83, -125}, {83, 83, 125},
{83, 125, 83}, {84, -23, 84}, {84, 23, 84}, {84, 84, -23}, {84, 84, 23},
{89, -173, 351}, {89, -14, 89}, {89, 14, 89}, {89, 89, -14}, {89, 89, 14},
{89, 173, 351}, {89, 351, -173}, {89, 351, 173}, {91, -86, 91}, {91, 86, 91},
{91, 91, -86}, {91, 91, 86}, {95, -232, 95}, {95, -146, 95}, {95, 95, -232},
{95, 95, -146}, {95, 95, 146}, {95, 95, 232}, {95, 146, 95}, {95, 232, 95},
{97, -28, 97}, {97, 28, 97}, {97, 97, -28}, {97, 97, 28}, {103, -164, 103},
{103, 103, -164}, {103, 103, 164}, {103, 164, 103}, {107, -145, 107},
{107, 107, -145}, {107, 107, 145}, {107, 145, 107}, {109, -14, 109}, {109, 14, 109},
{109, 109, -14}, {109, 109, 14}, {113, 112, -63}, {116, -95, 116}, {116, 95, 116},
{116, 116, -95}, {116, 116, 95}, {117, -61, 379}, {117, 379, -61}, {124, -541, 124},
{124, -431, 124}, {124, 124, -541}, {124, 124, -431}, {124, 124, 431},
{124, 124, 541}, {124, 431, 124}, {124, 541, 124}, {125, -166, 125}, {125, 125, -166},
{125, 125, 166}, {125, 166, 125}, {130, -313, 130}, {130, 130, -313},
{130, 130, 313}, {130, 313, 130}, {134, -5, 134}, {134, 5, 134}, {134, 134, -5},
{134, 134, 5}, {137, -422, 137}, {137, 137, -422}, {137, 137, 422}, {137, 422, 137},
{139, -628, 139}, {139, -263, 139}, {139, -142, 139}, {139, 139, -628},
{139, 139, -263}, {139, 139, -142}, {139, 139, 142}, {139, 139, 263}, {139, 139, 628},
{139, 142, 139}, {139, 263, 139}, {139, 628, 139}, {144, 25, 89}, {144, 89, 25},
{145, -698, 145}, {145, -214, 145}, {145, 145, -698}, {145, 145, -214},
{145, 145, 214}, {145, 145, 698}, {145, 214, 145}, {145, 698, 145}, {151, -329, 364},
{151, -163, 151}, {151, -9, 80}, {151, 80, -9}, {151, 151, -163}, {151, 151, 163},
{151, 163, 151}, {151, 364, -329}, {155, -8, 155}, {155, 8, 155}, {155, 155, -8},
{155, 155, 8}, {161, 29, 131}, {161, 131, 29}, {161, 188, -103}, {163, -302, 163},
{163, 163, -302}, {163, 163, 302}, {163, 302, 163}, {167, -457, 167}, {167, 167, -457},
{167, 167, 457}, {167, 457, 167}, {173, -89, 351}, {173, 351, -89}, {173, 707, 959},
{173, 959, 707}, {175, -767, 175}, {175, 175, -767}, {175, 175, 767}, {175, 767, 175},
{185, -61, 185}, {185, 61, 185}, {185, 185, -61}, {185, 185, 61}, {191, -235, 551},
{191, -122, 191}, {191, 49, 71}, {191, 71, 49}, {191, 122, 191}, {191, 191, -122},
{191, 191, 122}, {191, 551, -235}, {197, -526, 197}, {197, 197, -526}, {197, 197, 526},
{197, 526, 197}, {208, -41, 208}, {208, 41, 208}, {208, 208, -41}, {208, 208, 41},
{211, -137, 211}, {211, 137, 211}, {211, 211, -137}, {211, 211, 137}, {221, -932, 221},
{221, 221, -932}, {221, 221, 932}, {221, 932, 221}, {229, -237, 229}, {229, 229, -237},
{229, 229, 237}, {229, 237, 229}, {237, -458, 237}, {237, 237, -458}, {237, 237, 458},
{237, 458, 237}, {241, -44, 241}, {241, 44, 241}, {241, 241, -44}, {241, 241, 44},
{248, -139, 941}, {248, 59, 83}, {256, 13, 949}, {256, 67, 43}, {257, -791, 524},
{257, -131, 279}, {257, 279, -131}, {257, 524, -791}, {263, -278, 263},

```
{263, -197, 263}, {263, 197, 263}, {263, 263, -278}, {263, 263, -197},
{263, 263, 197}, {263, 263, 278}, {263, 278, 263}, {281, -136, 281}, {281, 136, 281},
{281, 281, -136}, {281, 281, 136}, {283, -794, 283}, {283, 283, -794},
{283, 283, 794}, {283, 794, 283}, {289, -79, 267}, {289, 267, -79}, {290, -791, 290},
{290, 290, -791}, {290, 290, 791}, {290, 791, 290}, {307, -679, 307},
{307, 307, -679}, {307, 307, 679}, {307, 679, 307}, {313, -260, 313}, {313, 260, 313},
{313, 313, -260}, {313, 313, 260}, {314, -139, 314}, {314, 139, 314},
{314, 314, -139}, {314, 314, 139}, {329, -920, 329}, {329, 329, -920},
{329, 329, 920}, {329, 920, 329}, {349, -145, 349}, {349, 145, 349}, {349, 349, -145},
{349, 349, 145}, {351, 89, 173}, {351, 173, 89}, {359, -76, 359}, {359, 76, 359},
{359, 359, -76}, {359, 359, 76}, {364, 151, -329}, {379, 117, -61}, {397, -283, 397},
{397, 283, 397}, {397, 397, -283}, {397, 397, 283}, {409, 49, 475}, {421, -728, 509},
{421, 509, -728}, {431, -248, 431}, {431, 248, 431}, {431, 431, -248},
{431, 431, 248}, {443, -53, 443}, {443, 53, 443}, {443, 443, -53}, {443, 443, 53},
{452, -241, 839}, {452, 839, -241}, {457, -334, 457}, {457, 334, 457},
{457, 457, -334}, {457, 457, 334}, {460, -329, 460}, {460, 329, 460},
{460, 460, -329}, {460, 460, 329}, {461, -784, 373}, {461, 373, -784},
{466, -221, 466}, {466, 221, 466}, {466, 466, -221}, {466, 466, 221},
{469, -395, 139}, {485, -707, 485}, {485, 485, -707}, {485, 485, 707},
{485, 707, 485}, {494, -553, 494}, {494, 494, -553}, {494, 494, 553}, {494, 553, 494},
{496, -833, 496}, {496, 496, -833}, {496, 496, 833}, {496, 833, 496}, {524, -791, 257},
{524, -257, 791}, {524, 257, -791}, {524, 257, 791}, {524, 791, -257},
{524, 791, 257}, {541, -248, 541}, {541, 248, 541}, {541, 541, -248}, {541, 541, 248},
{551, 191, -235}, {553, -988, 553}, {553, 553, -988}, {553, 553, 988},
{553, 988, 553}, {556, -137, 799}, {556, 799, -137}, {559, -148, 559},
{559, 148, 559}, {559, 559, -148}, {559, 559, 148}, {665, -293, 665}, {665, 293, 665},
{665, 665, -293}, {665, 665, 293}, {679, -614, 679}, {679, 614, 679},
{679, 679, -614}, {679, 679, 614}, {680, -511, 680}, {680, 511, 680},
{680, 680, -511}, {680, 680, 511}, {695, -16, 695}, {695, 16, 695}, {695, 695, -16},
{695, 695, 16}, {703, -679, 703}, {703, 679, 703}, {703, 703, -679}, {703, 703, 679},
{707, -970, 707}, {707, 707, -970}, {707, 707, 970}, {707, 970, 707}, {767, -350, 767},
{767, 350, 767}, {767, 767, -350}, {767, 767, 350}, {791, -580, 791},
{791, -257, 524}, {791, 524, -257}, {791, 580, 791}, {791, 791, -580},
{791, 791, 580}, {833, -992, 833}, {833, 833, -992}, {833, 833, 992}, {833, 992, 833},
{959, 173, 707}, {986, -65, 986}, {986, 65, 986}, {986, 986, -65}, {986, 986, 65}}
```

Out[ ]=

```
{{1, 0, 0}, {1, 0, -1}, {1, -1, 0}, {-1, 0, 0}, {-1, 1, 0}, {2, -1, -1}, {2, 1, -1},
 {-2, 1, -1}, {-1, 0, 1}, {-7, -1, 2}, {-13, -2, 5}, {-7, -1, 4}, {-1, 1, 2},
 {-1, 2, 1}, {7, -2, 1}, {13, -5, 2}, {7, -4, 1}, {-1, 2, 2}, {-13, 5, 20},
 {-13, 20, 5}, {-19, 14, 35}, {-19, 35, 14}, {23, 14, 1}, {-23, -1, -14}, {-7, 2, -1},
 {7, 1, -2}, {7, 4, 1}, {-3, 3, -2}, {-2, 13, -5}, {3, 2, -3}, {-7, -1, -4},
 {2, 5, -13}, {151, 34, 1}, {-151, -1, -34}, {-3, 3, 2}, {-13, 2, 5}, {-2, 1, 1},
 {3, -2, -3}, {13, -5, -2}, {1, -1, -2}, {1, -2, -1}, {35, 14, -19}, {-35, 19, -14},
 {-41, 9, 30}, {5, -2, -13}, {-5, 13, 2}, {41, -30, -9}, {-2, -1, 1}, {2, -1, 1},
 {-2, 7, 1}, {-14, 19, 13}, {130, 13, -83}, {-30, 41, 9}, {14, -13, -19},
 {-130, 83, -13}, {30, -9, -41}, {-119, 31, 94}, {-9, 41, 30}, {9, -30, -41},
 {119, -94, -31}, {-130, -13, 83}, {-9, 30, 41}, {130, -83, 13}, {9, -41, -30},
 {-37, 29, 76}, {37, -76, -29}, {41, -9, -30}, {-119, 94, 31}, {-41, 30, 9},
 {119, -31, -94}, {-30, 9, 41}, {30, -41, -9}, {23, 1, 14}, {-23, -14, -1},
 {127, 50, 73}, {-83, 115, -62}, {-127, -73, -50}, {83, 62, -115}, {-115, 83, 62},
 {2, -3, 3}, {-1, -4, -7}, {5, -13, 2}, {2, -7, -1}, {115, -62, -83}, {-26, 1, 7},
 {-139, 34, 59}, {139, -59, -34}, {-14, 13, 19}, {14, -19, -13}, {-21, 45, 14},
 {21, -14, -45}, {247, -92, 49}, {-7, -34, -73}, {-45, 14, 21}, {26, -1, -7},
 {139, 34, -59}, {325, -194, -269}, {119, 281, 350}, {-21, -14, 45}, {7, 34, 73}}
```

In[ ]:=

```
Intersection[B, W]
```

Out[ ]=

```
{}
```