

Mondrian Puzzles

```
(*Code for generating positions of squares based on a Bouwkamp code.*)
BouwkampCoords[BouwkampFormat_List] :=
Module[{nums = BouwkampFormat},
{order, height, width} = Take[nums, 3];
squares = Drop[nums, 3];
active = {{0, 0}, {0, height}};
coordinates = Table[{0}, {order}];
cornera = squares[[1]];
cornerb = cornerc = cornerd = 0;
Do[
ss = squares[[n]];
coordinates[[n]] =
Table[active[[1, 1]], {4}] + {{0, 0}, {0, ss}, {ss, ss}, {ss, 0}};
active = Sort[Switch[Sign[active[[1, 1, 2]] + ss - active[[1, 2, 2]]],
0, ReplacePart[active, 1 → active[[1]] + {{ss, 0}, {ss, 0}}],
-1, Flatten[{Drop[active, 1], {active[[1]] + {{0, ss}, {0, 0}},
{active[[1, 1]], active[[1, 1]] + {{ss, 0}, {ss, ss}}}], 1],
_, Flatten[{active, {"Error", n}}, 1]]];
If[active[[1, 1]] == "Error", Break[]];
active =
Partition[Flatten[Select[Split[Flatten[active, 1]], Length[#] < 2 &], 1], 2];
If[coordinates[[n, 2]] == {0, height}, cornerb = squares[[n]];
If[coordinates[[n, 3]] == {width, height}, cornerc = squares[[n]];
If[coordinates[[n, 4]] == {width, 0}, cornerd = squares[[n]],
{n, 1, order}];
coordinates = If[active == {{width, 0}, {width, height}},
Append[First /@ coordinates, {cornera, cornerb, cornerc, cornerd}],
Append[First /@ coordinates, {cornera, cornerb, cornerc, cornerd, active}]]];
```

```
(*Display squares of a Bouwkamp code.*)
ShowQuilt[BouwkampFormat_List, color_ : False] :=
With[{
vals = Drop[BouwkampFormat, 3],
order = BouwkampFormat[[1]], size = BouwkampFormat[[2]],
coord = BouwkampCoords[BouwkampFormat]},
With[{colors = If[color,
{Gray, White, Red, Yellow, Blue, Cyan, Magenta}[[Mod[#, 7, 1]]] & /@ vals,
Table[White, {Length[vals]}]}],
Graphics[{EdgeForm[{Black, Thick}], Opacity[.3],
Table[{colors[[n]], Rectangle[coord[[n]], coord[[n]] + vals[[n]]],
{n, 1, order}], Opacity[1], Black,
Table[If[vals[[n]] > size / 15, Style[Text[vals[[n]], coord[[n]] + vals[[n]] /
2], 18], Sequence @@ {}, {n, 1, order}]], ImageSize → {450, 370}]]]
```

```
(*Show a crushed version of a Bouwkamp code.*)
ShowMondrian[BouwkampFormat_List, color_: False, puzz_: False] :=
With[{
  vals = Drop[BouwkampFormat, 3], order = BouwkampFormat[[1]],
  size = BouwkampFormat[[2]], coord = BouwkampCoords[BouwkampFormat]],
With[{rec = Transpose[Flatten[
  Table[{coord[[n]], coord[[n]] + vals[[n]]}, {n, 1, order}], 1]],
  colors = If[color, {Gray, White, Red, Yellow, Blue, Cyan, Magenta}[[
    Mod[#, 7, 1]]] & /@ vals, Table[White, {Length[vals]}]],
With[{mondxy = Length[Union[#]] & /@ rec, mond = Union[#] & /@ rec},
With[{newrec = Partition[
  Transpose[{rec[[1]] /. Thread[Union[rec[[1]]] → Range[mondxy[[1]]]],
    rec[[2]] /. Thread[Union[rec[[2]]] → Range[mondxy[[2]]]]}], 2}},
Column[{
  If[puzz, Text@
    Style["Find sizes so that length equals each width in each rectangle.",
      12], Text@Style[" ", 12]],
  Graphics[{EdgeForm[{Black, Thick}], Opacity[.3],
    Table[{colors[[n]], Rectangle[newrec[[n, 1]], newrec[[n, 2]]}],
      {n, 1, order}], Opacity[1], If[puzz, White, Black],
    Table[Style[Text[vals[[n]], (newrec[[n, 1]] + newrec[[n, 2]]) / 2], 14],
      {n, 1, order}]], ImageSize → {450, 350}], Alignment → Center]]];
```

```
(*Make a puzzle from a crushed version of the Bouwkamp code.*)
ShowPuzzle[BouwkampFormat_List] :=
With[{
  vals = Drop[BouwkampFormat, 3], order = BouwkampFormat[[1]],
  size = BouwkampFormat[[2]], coord = BouwkampCoords[BouwkampFormat]],
With[{rec = Transpose[Flatten[
  Table[{coord[[n]], coord[[n]] + vals[[n]]}, {n, 1, order}], 1]],
Column[{
  Text["Divide into rectangles with equal row and column sums."],
  Text["No two rectangles share a full edge."],
  Graphics[{
    MapIndexed[Style[Text[#1, {#2[[1]] + 1 / 2, 1 / 2}], 16] &,
      Differences[Union[rec[[1]]]],
    MapIndexed[Style[Text[#1, {1 / 2, #2[[1]] + 1 / 2}], 16] &,
      Differences[Union[rec[[2]]]],
    Gray,
    Table[Line[{{1, size}, {Length[Union[rec[[1]]], size}],
      {size, 1, Length[Union[rec[[2]]]]}],
    Table[Line[{{size, 1}, {size, Length[Union[rec[[2]]]]}],
      {size, 1, Length[Union[rec[[1]]]]}],
    AbsoluteThickness[3], Black,
    Line[{{1, 1}, {1, Length[Union[rec[[2]]]]}, {Length[Union[rec[[1]]],
      Length[Union[rec[[2]]]], {Length[Union[rec[[1]]], 1}, {1, 1}}
    }, ImageSize → {450, 330}], Alignment → Center]]];
```

(*Bouwkamp formatted rectangle dissections.

The first three numbers are the order (number of squares), width, and height.

```

The rest of each list is square sizes.*)
smallrec =
{{9, 32, 33, 9, 8, 15, 1, 7, 10, 4, 18, 14}, {9, 61, 69, 25, 36, 16, 9, 7, 2, 5, 33, 28},
 {10, 47, 65, 22, 25, 19, 3, 11, 17, 5, 6, 24, 23},
 {10, 55, 57, 15, 13, 27, 2, 11, 17, 8, 3, 30, 25},
 {13, 50, 56, 14, 9, 13, 14, 5, 4, 16, 1, 19, 15, 4, 27, 23},
 {11, 95, 98, 25, 22, 48, 3, 19, 28, 12, 7, 5, 50, 45},
 {11, 96, 97, 31, 24, 41, 7, 17, 26, 12, 2, 56, 14, 40},
 {12, 96, 99, 31, 21, 44, 10, 11, 27, 13, 1, 12, 14, 55, 41},
 {11, 81, 112, 38, 43, 33, 5, 19, 29, 9, 10, 41, 1, 40},
 {11, 86, 98, 35, 51, 24, 11, 6, 5, 1, 8, 47, 7, 39},
 {12, 36, 40, 11, 12, 13, 10, 1, 9, 4, 3, 10, 7, 19, 17},
 {12, 60, 92, 17, 15, 28, 2, 13, 19, 8, 33, 27, 2, 31, 29},
 {13, 75, 112, 33, 42, 24, 9, 20, 31, 19, 5, 14, 11, 3, 39, 36},
 {12, 84, 68, 23, 24, 37, 17, 6, 5, 19, 11, 6, 31, 28, 25},
 {13, 83, 112, 39, 44, 31, 8, 3, 14, 27, 11, 12, 13, 42, 1, 41},
 {12, 72, 68, 20, 12, 13, 27, 11, 1, 14, 17, 3, 14, 41, 31},
 {12, 80, 81, 22, 21, 37, 1, 11, 9, 23, 2, 7, 13, 44, 36},
 {12, 32, 40, 11, 21, 5, 6, 4, 1, 3, 4, 7, 6, 19, 13},
 {13, 64, 72, 16, 11, 17, 20, 5, 6, 21, 20, 3, 23, 35, 6, 29},
 {13, 23, 23, 5, 3, 4, 11, 2, 1, 5, 7, 3, 2, 1, 12, 11},
 {13, 50, 54, 12, 13, 25, 8, 3, 1, 2, 12, 5, 13, 8, 29, 21},
 {13, 64, 72, 16, 13, 35, 3, 10, 12, 7, 5, 12, 17, 10, 37, 27},
 {13, 66, 70, 20, 13, 33, 5, 8, 2, 3, 21, 1, 12, 8, 37, 29},
 {13, 83, 85, 26, 19, 38, 7, 12, 23, 10, 5, 7, 13, 2, 47, 36},
 {13, 97, 98, 29, 26, 42, 3, 7, 16, 28, 4, 11, 2, 56, 13, 41},
 {13, 52, 72, 21, 31, 11, 10, 1, 13, 10, 17, 12, 3, 7, 28, 24},
 {13, 60, 76, 19, 13, 28, 6, 7, 24, 1, 8, 15, 21, 33, 6, 27},
 {13, 85, 112, 25, 14, 17, 29, 11, 3, 8, 12, 44, 41, 43, 1, 42},
 {13, 64, 72, 27, 37, 16, 5, 6, 4, 1, 3, 4, 7, 6, 35, 29},
 {14, 72, 85, 29, 43, 14, 15, 12, 2, 1, 42, 1, 4, 11, 3, 7, 30},
 {13, 75, 112, 24, 20, 31, 9, 11, 19, 5, 14, 42, 33, 3, 39, 36},
 {13, 56, 60, 16, 15, 25, 5, 10, 12, 4, 9, 35, 11, 1, 10, 21},
 {13, 44, 72, 20, 24, 12, 5, 3, 2, 1, 25, 7, 19, 2, 23, 21},
 {13, 44, 76, 16, 28, 9, 7, 2, 5, 11, 8, 25, 19, 2, 23, 21},
 {14, 52, 68, 16, 17, 19, 15, 1, 16, 2, 21, 13, 2, 11, 7, 28, 24},
 {14, 75, 106, 27, 20, 28, 12, 8, 22, 5, 36, 17, 24, 15, 9, 42, 33},
 {14, 77, 88, 20, 12, 16, 29, 8, 4, 20, 28, 7, 22, 12, 15, 40, 37},
 {14, 85, 104, 28, 20, 37, 8, 12, 32, 4, 16, 11, 26, 12, 15, 44, 41},
 {15, 28, 33, 8, 6, 5, 9, 1, 4, 2, 5, 10, 2, 11, 7, 15, 2, 13},
 {14, 49, 53, 13, 14, 22, 12, 1, 7, 8, 6, 1, 31, 10, 2, 8, 18},
 {14, 71, 106, 23, 19, 29, 9, 10, 18, 5, 13, 1, 40, 31, 3, 37, 34},
 {14, 89, 104, 32, 24, 33, 8, 16, 28, 12, 7, 26, 4, 19, 16, 45, 44},
 {15, 40, 44, 11, 9, 20, 2, 7, 8, 5, 3, 5, 4, 9, 2, 24, 7, 16},
 {16, 41, 59, 19, 22, 10, 9, 7, 15, 1, 7, 1, 11, 8, 5, 2, 3, 22, 19},
 {14, 53, 56, 15, 12, 26, 3, 9, 18, 4, 5, 3, 1, 2, 30, 5, 23},
 {14, 58, 42, 17, 9, 10, 22, 8, 1, 11, 25, 8, 3, 2, 20, 5, 13},
 {14, 64, 67, 18, 15, 31, 3, 12, 21, 5, 3, 4, 2, 1, 36, 7, 28},
 {14, 60, 61, 18, 14, 28, 5, 9, 16, 2, 1, 4, 3, 11, 5, 33, 27},
 {14, 67, 77, 28, 39, 20, 8, 5, 3, 4, 38, 3, 2, 1, 5, 4, 29},

```

```

{14, 77, 83, 20, 18, 39, 2, 16, 13, 9, 4, 5, 17, 16, 5, 44, 33},
{14, 81, 80, 21, 11, 13, 36, 9, 2, 15, 1, 8, 22, 15, 8, 44, 37},
{14, 81, 97, 28, 53, 15, 13, 2, 11, 17, 8, 3, 2, 7, 44, 5, 37},
{14, 82, 83, 25, 20, 37, 5, 7, 8, 22, 8, 6, 1, 9, 14, 46, 36},
{14, 88, 101, 37, 51, 26, 11, 8, 3, 4, 50, 1, 3, 7, 2, 5, 38},
{14, 89, 105, 34, 55, 19, 15, 9, 6, 13, 6, 11, 50, 1, 8, 7, 39},
{14, 90, 103, 37, 53, 26, 11, 7, 4, 3, 1, 4, 50, 8, 2, 6, 40},
{15, 78, 103, 23, 31, 24, 15, 8, 7, 17, 7, 29, 10, 22, 27, 43, 8, 35},
{16, 51, 51, 15, 14, 22, 1, 13, 16, 9, 13, 4, 9, 20, 5, 4, 1, 16, 15},
{15, 34, 48, 12, 9, 13, 5, 4, 10, 2, 1, 16, 8, 11, 7, 4, 19, 15},
{15, 46, 60, 14, 15, 17, 13, 1, 14, 2, 19, 11, 2, 9, 7, 2, 24, 22},
{15, 64, 97, 19, 16, 29, 3, 13, 22, 12, 30, 16, 18, 14, 2, 12, 38, 26},
{15, 76, 88, 24, 27, 25, 13, 11, 2, 23, 8, 21, 2, 17, 15, 4, 40, 36},
{15, 79, 89, 22, 20, 13, 24, 7, 6, 1, 5, 2, 26, 24, 29, 43, 7, 36},
{15, 83, 102, 25, 30, 28, 20, 5, 2, 26, 13, 24, 2, 11, 22, 13, 48, 35},
{15, 96, 97, 28, 27, 41, 13, 14, 16, 12, 7, 17, 1, 56, 13, 3, 10, 40},
{16, 41, 48, 13, 12, 16, 1, 7, 4, 14, 3, 5, 12, 8, 2, 7, 21, 1, 20},
{16, 73, 82, 18, 17, 38, 1, 16, 19, 7, 4, 5, 16, 3, 3, 1, 44, 13, 29},
{16, 76, 96, 20, 29, 27, 11, 9, 2, 25, 2, 15, 23, 13, 20, 8, 12, 44, 32},
{19, 18, 18, 4, 3, 4, 7, 1, 2, 3, 2, 1, 3, 1, 2, 1, 2, 4, 1, 11, 3, 7},
{15, 39, 39, 9, 7, 12, 11, 2, 5, 11, 3, 8, 8, 7, 2, 5, 20, 19},
{15, 43, 51, 14, 11, 18, 4, 7, 13, 1, 5, 2, 9, 14, 7, 24, 5, 19},
{15, 45, 49, 14, 16, 15, 10, 4, 1, 14, 2, 8, 7, 6, 1, 6, 25, 20},
{15, 46, 80, 21, 25, 17, 4, 13, 16, 20, 7, 3, 4, 15, 11, 2, 24, 22},
{15, 50, 56, 16, 15, 19, 1, 5, 9, 13, 4, 5, 14, 9, 5, 9, 27, 23},
{15, 55, 64, 18, 14, 23, 4, 10, 16, 6, 7, 16, 10, 6, 4, 9, 30, 25},
{15, 72, 100, 23, 18, 31, 5, 13, 20, 8, 12, 40, 32, 11, 29, 25, 7, 18},
{15, 75, 107, 31, 44, 18, 13, 5, 16, 13, 23, 23, 3, 10, 12, 7, 40, 35},
{15, 83, 98, 21, 29, 33, 13, 8, 5, 23, 9, 5, 28, 18, 14, 46, 9, 37},
{15, 83, 115, 35, 48, 18, 17, 4, 17, 27, 1, 20, 19, 7, 10, 43, 3, 40},
{15, 87, 103, 28, 22, 37, 7, 15, 27, 1, 8, 18, 15, 27, 3, 12, 48, 39},
{16, 71, 84, 25, 19, 27, 11, 8, 20, 5, 3, 7, 25, 15, 4, 11, 39, 7, 32},
{16, 76, 96, 28, 19, 29, 9, 10, 32, 4, 1, 3, 10, 27, 7, 17, 4, 40, 36},
{19, 72, 85, 17, 11, 16, 11, 17, 6, 5, 5, 6, 1, 25, 24, 23, 6, 17, 44, 5, 11, 28},
{15, 35, 37, 10, 8, 17, 2, 6, 5, 3, 4, 2, 1, 8, 3, 7, 20, 15},
{15, 39, 39, 8, 5, 7, 19, 3, 2, 1, 8, 12, 5, 3, 2, 1, 20, 19},
{15, 41, 41, 12, 11, 18, 1, 3, 7, 11, 2, 5, 2, 23, 4, 1, 3, 18},
{15, 45, 49, 9, 13, 23, 5, 4, 2, 5, 10, 4, 1, 3, 12, 7, 26, 19},
{15, 48, 53, 9, 14, 25, 4, 5, 3, 1, 2, 7, 11, 5, 12, 8, 28, 20},
{15, 79, 97, 27, 24, 28, 3, 5, 12, 4, 28, 2, 32, 7, 19, 42, 5, 37},
{15, 84, 88, 16, 11, 17, 40, 5, 6, 21, 23, 15, 6, 3, 12, 48, 9, 36},
{15, 86, 95, 21, 20, 45, 6, 14, 16, 5, 11, 3, 11, 22, 8, 14, 50, 36},
{15, 88, 95, 26, 22, 40, 4, 18, 13, 17, 9, 4, 3, 55, 5, 19, 14, 33},
{15, 95, 98, 25, 11, 14, 45, 8, 3, 5, 12, 6, 7, 31, 19, 11, 53, 42},
{15, 95, 98, 25, 28, 42, 14, 8, 3, 5, 12, 14, 6, 7, 20, 19, 56, 39},
{15, 96, 97, 28, 27, 41, 1, 12, 14, 29, 7, 3, 2, 1, 56, 4, 11, 40},
{16, 48, 48, 9, 7, 12, 20, 2, 5, 11, 9, 8, 8, 3, 28, 2, 7, 5, 20},
{16, 48, 48, 12, 7, 9, 20, 5, 2, 11, 9, 8, 3, 8, 28, 7, 2, 5, 20},
{16, 52, 52, 13, 7, 8, 24, 6, 1, 9, 15, 4, 6, 7, 5, 1, 4, 28, 24},
{16, 52, 56, 13, 15, 24, 11, 2, 8, 9, 1, 5, 2, 12, 1, 32, 3, 8, 20},

```

```

{16, 64, 71, 19, 16, 29, 3, 13, 12, 10, 2, 8, 42, 8, 6, 2, 12, 10, 22},
{16, 82, 90, 17, 24, 41, 10, 7, 3, 11, 17, 13, 5, 6, 17, 1, 16, 49, 33},
{16, 84, 88, 19, 25, 40, 13, 6, 7, 11, 6, 7, 5, 1, 20, 8, 16, 48, 36},
{17, 64, 64, 16, 9, 11, 28, 7, 2, 5, 8, 20, 5, 3, 2, 9, 7, 8, 36, 28},
{15, 21, 30, 10, 11, 5, 4, 1, 3, 9, 2, 5, 4, 1, 3, 11, 1, 10},
{15, 27, 39, 13, 14, 5, 3, 4, 1, 3, 12, 2, 1, 8, 7, 14, 1, 13},
{15, 62, 110, 27, 35, 19, 8, 11, 32, 30, 9, 8, 15, 1, 7, 34, 6, 28},
{15, 64, 89, 15, 16, 33, 14, 1, 17, 10, 4, 6, 22, 26, 16, 34, 4, 30},
{15, 67, 101, 27, 40, 17, 10, 7, 3, 4, 10, 29, 22, 6, 16, 35, 3, 32},
{15, 68, 88, 16, 20, 32, 11, 5, 1, 7, 12, 6, 24, 19, 25, 37, 6, 31},
{15, 79, 107, 33, 46, 17, 16, 3, 17, 26, 5, 14, 13, 4, 9, 44, 9, 35},
{16, 78, 108, 32, 46, 18, 14, 4, 10, 19, 27, 15, 7, 1, 9, 8, 43, 8, 35},
{15, 48, 57, 19, 29, 9, 10, 5, 4, 3, 8, 28, 2, 5, 4, 1, 3, 20},
{15, 63, 75, 25, 38, 12, 13, 5, 3, 4, 3, 11, 37, 2, 1, 8, 7, 26},
{15, 70, 82, 27, 43, 7, 8, 12, 6, 1, 5, 4, 12, 4, 11, 8, 39, 31},
{15, 81, 95, 31, 50, 16, 15, 5, 6, 4, 12, 4, 9, 45, 8, 1, 7, 36},
{15, 81, 97, 31, 50, 13, 18, 8, 5, 3, 14, 5, 1, 4, 47, 11, 9, 34},
{15, 90, 105, 34, 56, 16, 18, 14, 2, 12, 5, 3, 2, 1, 8, 49, 7, 41},
{15, 52, 80, 23, 29, 17, 6, 12, 23, 16, 1, 7, 6, 1, 5, 8, 28, 24},
{17, 51, 64, 14, 16, 21, 12, 2, 8, 10, 5, 16, 2, 6, 14, 4, 11, 10, 27, 24},
{15, 69, 118, 31, 38, 24, 7, 17, 28, 26, 15, 8, 20, 11, 4, 12, 37, 32},
{16, 28, 40, 8, 9, 11, 7, 1, 8, 2, 13, 5, 2, 3, 7, 8, 4, 16, 12},
{16, 28, 44, 8, 7, 13, 1, 6, 9, 4, 15, 7, 6, 1, 5, 8, 4, 16, 12},
{16, 45, 56, 12, 14, 19, 10, 2, 6, 10, 5, 14, 2, 4, 12, 10, 9, 23, 22},
{16, 53, 75, 13, 16, 24, 10, 3, 7, 12, 17, 4, 20, 16, 13, 4, 9, 31, 22},
{17, 30, 45, 8, 9, 13, 7, 1, 6, 4, 2, 15, 8, 7, 1, 6, 9, 4, 17, 13},
{18, 20, 37, 9, 11, 7, 2, 5, 8, 5, 3, 4, 2, 1, 1, 7, 6, 7, 2, 11, 9},
{15, 51, 101, 22, 29, 15, 7, 8, 28, 23, 10, 18, 16, 7, 9, 8, 26, 25},
{15, 54, 78, 23, 31, 13, 10, 2, 10, 19, 3, 9, 16, 1, 9, 10, 28, 26},
{15, 72, 109, 20, 19, 33, 1, 10, 8, 21, 2, 6, 12, 39, 33, 2, 37, 35},
{16, 26, 42, 8, 7, 11, 3, 4, 6, 2, 4, 1, 16, 10, 7, 3, 4, 15, 11},
{16, 33, 47, 7, 9, 17, 5, 2, 3, 8, 8, 3, 9, 13, 11, 5, 4, 17, 16},
{16, 34, 55, 14, 20, 8, 6, 2, 9, 15, 10, 3, 6, 9, 4, 1, 20, 5, 14},
{17, 21, 30, 9, 12, 5, 4, 1, 4, 7, 1, 4, 6, 1, 3, 3, 2, 1, 11, 10},
{17, 27, 43, 7, 8, 12, 6, 1, 5, 4, 1, 15, 12, 7, 3, 2, 1, 16, 4, 11},
{15, 58, 53, 16, 14, 28, 2, 12, 18, 7, 5, 3, 25, 8, 1, 6, 19, 14},
{15, 59, 107, 27, 32, 19, 8, 3, 29, 11, 30, 11, 18, 4, 7, 31, 3, 28},
{16, 46, 63, 16, 11, 19, 5, 6, 20, 1, 7, 5, 14, 12, 3, 11, 27, 8, 19},
{16, 84, 96, 21, 19, 44, 2, 17, 23, 9, 8, 20, 3, 52, 2, 7, 5, 12, 32},
{15, 40, 44, 8, 5, 7, 20, 3, 2, 9, 11, 5, 4, 9, 2, 24, 7, 16},
{15, 59, 103, 25, 34, 16, 9, 6, 37, 1, 5, 13, 4, 9, 22, 5, 32, 27},
{15, 69, 105, 31, 38, 19, 12, 5, 33, 6, 11, 1, 5, 20, 16, 35, 1, 34},
{15, 77, 115, 33, 44, 20, 13, 10, 34, 5, 8, 2, 3, 22, 21, 40, 3, 37},
{16, 53, 61, 10, 14, 29, 6, 4, 3, 15, 5, 1, 4, 9, 1, 11, 32, 10, 21},
{16, 66, 114, 26, 40, 14, 12, 2, 7, 3, 16, 1, 39, 4, 11, 27, 4, 35, 31},
{16, 95, 99, 30, 21, 44, 10, 11, 29, 1, 10, 1, 12, 7, 3, 4, 55, 11, 40},
{16, 105, 86, 31, 28, 46, 4, 24, 24, 6, 1, 5, 11, 6, 40, 7, 4, 34, 31},
{15, 79, 98, 28, 51, 17, 11, 6, 5, 1, 4, 21, 3, 7, 4, 47, 11, 32},
{15, 88, 93, 25, 20, 43, 5, 15, 30, 7, 8, 5, 2, 1, 50, 3, 8, 38},
{15, 52, 53, 16, 12, 24, 5, 7, 14, 2, 1, 4, 3, 2, 5, 9, 29, 23},

```

```

{15, 65, 73, 14, 15, 36, 13, 1, 7, 9, 5, 2, 11, 18, 10, 1, 37, 28},
{17, 34, 34, 6, 5, 8, 15, 1, 4, 7, 1, 7, 5, 6, 1, 5, 1, 4, 19, 15},
{15, 93, 73, 32, 23, 38, 9, 14, 41, 10, 4, 3, 35, 7, 9, 1, 8, 17},
{16, 98, 83, 31, 13, 8, 9, 37, 5, 3, 2, 7, 5, 18, 12, 3, 9, 52, 46},
{18, 39, 33, 13, 4, 3, 5, 14, 1, 2, 5, 3, 4, 2, 1, 4, 1, 5, 3, 20, 19},
{16, 70, 99, 19, 23, 28, 15, 4, 11, 16, 11, 17, 26, 21, 6, 23, 39, 8, 31},
{16, 81, 80, 22, 13, 17, 29, 9, 4, 21, 31, 9, 20, 19, 11, 31, 27, 4, 23},
{16, 86, 94, 26, 21, 39, 5, 16, 31, 14, 2, 12, 29, 6, 20, 37, 3, 26, 23},
{16, 39, 56, 9, 11, 19, 7, 2, 5, 8, 12, 11, 16, 10, 2, 8, 5, 21, 18},
{16, 51, 67, 15, 16, 20, 11, 4, 3, 9, 4, 7, 5, 19, 14, 18, 5, 28, 23},
{16, 64, 94, 28, 36, 20, 8, 10, 11, 23, 2, 7, 1, 12, 17, 5, 12, 35, 29},
{16, 81, 113, 22, 20, 39, 2, 18, 24, 8, 10, 9, 30, 30, 2, 21, 7, 44, 37},
{17, 33, 54, 10, 11, 12, 9, 1, 8, 3, 1, 2, 11, 5, 18, 4, 15, 17, 1, 16},
{17, 34, 43, 9, 13, 12, 5, 4, 1, 11, 1, 7, 10, 6, 9, 4, 1, 20, 5, 14},
{17, 36, 48, 12, 11, 13, 1, 8, 2, 8, 5, 15, 3, 2, 1, 9, 12, 4, 20, 16},
{17, 39, 72, 11, 12, 16, 10, 1, 9, 4, 5, 15, 14, 10, 4, 21, 18, 1, 20, 19},
{17, 48, 45, 13, 19, 16, 7, 6, 3, 13, 1, 9, 11, 7, 8, 4, 3, 17, 16, 15},
{17, 57, 46, 15, 10, 6, 8, 18, 4, 2, 10, 5, 9, 16, 4, 28, 13, 15, 1, 14},
{19, 52, 50, 13, 12, 27, 1, 11, 14, 7, 4, 9, 5, 8, 23, 2, 5, 4, 3, 1, 15, 14},
{16, 36, 56, 10, 9, 17, 1, 8, 11, 4, 10, 11, 15, 9, 1, 12, 20, 4, 16},
{16, 37, 53, 16, 21, 9, 7, 2, 7, 12, 2, 7, 11, 2, 5, 6, 3, 20, 17},
{16, 42, 79, 17, 25, 9, 8, 1, 11, 21, 10, 21, 8, 13, 3, 5, 22, 2, 20},
{16, 45, 74, 20, 25, 15, 5, 7, 11, 12, 3, 4, 18, 14, 1, 13, 3, 24, 21},
{16, 51, 61, 17, 12, 22, 5, 7, 16, 6, 4, 3, 9, 16, 10, 2, 7, 28, 23},
{16, 51, 61, 17, 13, 21, 4, 9, 16, 5, 4, 17, 11, 3, 7, 1, 6, 28, 23},
{16, 57, 64, 18, 16, 23, 6, 10, 14, 4, 10, 7, 16, 6, 4, 2, 9, 32, 25},
{16, 57, 74, 16, 20, 21, 12, 4, 8, 15, 1, 22, 20, 7, 8, 6, 1, 31, 26},
{16, 60, 94, 26, 34, 18, 8, 9, 17, 16, 1, 8, 19, 1, 15, 12, 14, 31, 29},
{16, 71, 80, 17, 8, 7, 13, 26, 1, 6, 9, 19, 26, 6, 20, 11, 14, 37, 34},
{16, 73, 122, 22, 21, 30, 1, 11, 9, 23, 2, 37, 13, 36, 14, 23, 41, 9, 32},
{16, 75, 102, 21, 23, 31, 19, 2, 17, 8, 39, 36, 7, 32, 26, 9, 1, 8, 17},
{16, 83, 99, 27, 25, 31, 2, 17, 6, 29, 9, 28, 2, 7, 14, 5, 12, 43, 40},
{16, 96, 86, 28, 22, 46, 7, 15, 27, 1, 8, 14, 9, 15, 40, 4, 10, 31, 25},
{16, 96, 86, 28, 23, 45, 7, 16, 26, 2, 9, 15, 10, 4, 41, 14, 32, 9, 23},
{17, 28, 22, 8, 7, 13, 3, 4, 6, 2, 4, 1, 5, 4, 9, 8, 2, 6, 1, 5},
{17, 55, 66, 16, 7, 5, 8, 19, 2, 3, 9, 11, 22, 3, 13, 20, 6, 7, 28, 27},
{17, 60, 72, 20, 8, 11, 21, 5, 3, 2, 12, 7, 24, 3, 2, 19, 17, 4, 32, 28},
{17, 68, 58, 18, 23, 27, 10, 8, 3, 16, 4, 2, 9, 31, 12, 5, 4, 1, 19, 18},
{17, 72, 61, 23, 18, 31, 5, 13, 15, 7, 6, 1, 5, 8, 3, 11, 30, 8, 23, 19},
{17, 72, 105, 21, 13, 14, 24, 8, 5, 4, 10, 3, 6, 32, 40, 21, 11, 10, 41, 31},
{17, 74, 86, 21, 13, 18, 22, 8, 5, 19, 4, 29, 26, 8, 11, 5, 3, 2, 38, 36},
{17, 75, 96, 23, 16, 36, 7, 9, 28, 2, 11, 15, 32, 22, 21, 4, 28, 1, 24, 23},
{17, 75, 97, 21, 12, 15, 27, 9, 3, 6, 12, 36, 39, 19, 17, 8, 31, 2, 23, 21},
{17, 76, 89, 24, 22, 30, 2, 13, 7, 26, 6, 1, 9, 22, 15, 4, 13, 39, 2, 37},
{18, 38, 49, 13, 12, 13, 1, 8, 3, 14, 2, 11, 5, 7, 6, 2, 9, 1, 7, 22, 16},
{18, 40, 48, 12, 8, 7, 13, 1, 6, 4, 5, 15, 1, 9, 16, 5, 4, 1, 3, 21, 19},
{18, 72, 97, 21, 18, 33, 3, 15, 24, 12, 13, 23, 21, 11, 4, 3, 10, 7, 10, 41, 31},
{19, 43, 77, 19, 24, 14, 5, 9, 20, 11, 12, 10, 1, 1, 6, 13, 9, 5, 4, 7, 23, 20},
{17, 48, 51, 14, 12, 22, 2, 10, 16, 8, 9, 15, 21, 3, 2, 7, 5, 1, 14, 13},
{16, 70, 99, 26, 44, 15, 11, 4, 7, 19, 16, 11, 24, 5, 6, 39, 1, 7, 31},

```

```

{17, 45, 48, 12, 7, 9, 17, 5, 2, 3, 8, 20, 11, 14, 8, 3, 17, 16, 4, 12},
{16, 36, 56, 15, 21, 7, 8, 6, 15, 6, 1, 5, 4, 1, 9, 12, 4, 20, 16},
{16, 51, 85, 20, 31, 9, 11, 7, 2, 5, 14, 25, 12, 3, 11, 15, 7, 29, 22},
{16, 57, 86, 20, 14, 23, 5, 9, 1, 4, 15, 6, 3, 33, 9, 24, 3, 30, 27},
{16, 59, 89, 27, 32, 14, 8, 5, 3, 8, 26, 6, 5, 13, 20, 8, 5, 31, 28},
{16, 63, 64, 20, 16, 27, 5, 11, 18, 2, 1, 4, 3, 5, 2, 3, 37, 8, 26},
{16, 78, 112, 36, 42, 20, 16, 13, 29, 4, 9, 3, 16, 19, 5, 14, 4, 41, 37},
{16, 84, 96, 19, 21, 44, 17, 2, 23, 9, 8, 3, 20, 52, 7, 2, 5, 12, 32},
{16, 93, 105, 24, 19, 50, 5, 14, 20, 9, 11, 12, 23, 8, 7, 5, 55, 15, 38},
{17, 40, 39, 13, 5, 7, 15, 3, 2, 1, 8, 4, 1, 3, 10, 4, 2, 24, 6, 16},
{17, 54, 61, 14, 11, 29, 3, 8, 12, 5, 6, 7, 1, 5, 13, 4, 3, 32, 9, 22},
{17, 55, 64, 11, 16, 28, 6, 5, 1, 8, 12, 7, 11, 4, 8, 36, 10, 1, 9, 19},
{17, 69, 67, 17, 12, 13, 27, 5, 6, 1, 14, 21, 1, 7, 5, 2, 3, 40, 8, 29},
{17, 92, 98, 22, 27, 43, 17, 5, 12, 11, 9, 2, 7, 8, 5, 22, 7, 55, 15, 37},
{17, 97, 98, 30, 12, 13, 42, 11, 1, 14, 7, 4, 3, 15, 27, 13, 1, 56, 14, 41},
{18, 61, 43, 20, 10, 11, 20, 7, 3, 2, 9, 5, 3, 4, 3, 2, 23, 8, 23, 7, 15},
{19, 45, 49, 10, 12, 23, 7, 3, 1, 11, 4, 6, 5, 1, 3, 1, 7, 2, 7, 26, 5, 19},
{16, 41, 61, 15, 26, 7, 8, 5, 2, 1, 4, 3, 3, 13, 16, 12, 22, 3, 19},
{16, 44, 84, 20, 24, 16, 4, 12, 7, 9, 5, 2, 11, 25, 8, 19, 23, 2, 21},
{16, 56, 48, 16, 13, 27, 7, 6, 12, 4, 1, 5, 8, 4, 9, 6, 21, 20, 15},
{16, 64, 61, 14, 16, 34, 10, 4, 2, 14, 6, 16, 10, 4, 11, 27, 21, 5, 16},
{16, 72, 94, 34, 38, 23, 11, 6, 11, 21, 1, 5, 12, 6, 10, 2, 4, 37, 35},
{16, 73, 109, 31, 42, 19, 12, 1, 9, 32, 5, 8, 2, 3, 21, 20, 38, 3, 35},
{16, 91, 72, 27, 30, 34, 17, 10, 9, 17, 4, 38, 7, 3, 1, 8, 4, 28, 25},
{16, 91, 86, 23, 20, 48, 3, 17, 16, 10, 6, 4, 21, 22, 10, 38, 3, 28, 25},
{16, 105, 71, 30, 19, 20, 36, 11, 8, 7, 13, 15, 41, 9, 4, 1, 35, 5, 29},
{17, 28, 25, 8, 6, 14, 2, 4, 7, 3, 1, 3, 4, 2, 1, 4, 11, 10, 3, 7},
{17, 36, 30, 9, 11, 16, 5, 4, 4, 7, 1, 3, 6, 1, 3, 4, 2, 14, 12, 10},
{17, 57, 53, 11, 16, 30, 6, 5, 1, 8, 12, 7, 11, 4, 7, 9, 7, 23, 18, 16},
{17, 57, 102, 25, 32, 18, 7, 11, 6, 7, 15, 5, 1, 8, 30, 4, 27, 29, 1, 28},
{17, 72, 111, 29, 43, 14, 15, 13, 1, 10, 33, 7, 9, 5, 2, 21, 18, 37, 2, 35},
{17, 80, 71, 19, 10, 11, 40, 9, 1, 12, 24, 4, 16, 4, 11, 1, 10, 31, 28, 21},
{18, 39, 25, 11, 8, 7, 13, 1, 6, 3, 6, 14, 2, 5, 12, 5, 1, 3, 1, 7, 6},
{16, 51, 86, 22, 29, 9, 8, 5, 3, 2, 1, 30, 1, 11, 10, 21, 3, 27, 24},
{16, 54, 57, 9, 7, 12, 26, 2, 5, 11, 8, 9, 14, 5, 4, 5, 9, 31, 23},
{16, 55, 54, 16, 13, 26, 7, 6, 11, 5, 1, 5, 1, 7, 6, 3, 2, 28, 27},
{16, 66, 54, 18, 19, 29, 16, 2, 1, 4, 14, 3, 7, 4, 25, 4, 3, 21, 20},
{16, 66, 114, 26, 40, 12, 14, 7, 3, 2, 1, 16, 39, 4, 11, 27, 4, 35, 31},
{16, 76, 82, 14, 9, 13, 40, 5, 4, 17, 19, 7, 10, 15, 4, 11, 8, 42, 34},
{16, 79, 99, 25, 54, 12, 13, 11, 1, 14, 7, 4, 3, 13, 2, 11, 45, 10, 34},
{16, 87, 61, 28, 14, 16, 29, 9, 5, 3, 13, 8, 5, 4, 12, 33, 10, 32, 22},
{16, 89, 93, 27, 18, 44, 7, 11, 2, 5, 26, 3, 1, 10, 9, 14, 5, 49, 40},
{16, 91, 104, 19, 18, 54, 1, 17, 20, 4, 13, 24, 7, 6, 1, 9, 50, 8, 41},
{16, 103, 96, 26, 17, 21, 39, 11, 6, 3, 18, 5, 1, 4, 24, 2, 22, 57, 46},
{17, 31, 57, 12, 19, 7, 5, 3, 2, 6, 1, 1, 20, 5, 11, 8, 3, 5, 18, 13},
{17, 52, 58, 11, 14, 27, 8, 3, 4, 13, 1, 3, 7, 2, 5, 11, 1, 10, 31, 21},
{17, 52, 63, 20, 32, 8, 12, 5, 3, 2, 1, 4, 10, 31, 4, 3, 1, 6, 5, 21},
{17, 54, 55, 16, 13, 25, 4, 5, 4, 15, 1, 5, 1, 3, 4, 2, 5, 9, 30, 24},
{17, 56, 60, 9, 7, 12, 28, 2, 5, 11, 8, 9, 16, 3, 2, 7, 5, 8, 32, 24},
{17, 63, 73, 25, 38, 9, 7, 9, 2, 5, 11, 3, 6, 8, 3, 35, 5, 1, 4, 28},

```

```

{17, 64, 64, 16, 7, 5, 8, 28, 2, 3, 9, 11, 20, 5, 2, 9, 7, 8, 36, 28},
{17, 66, 83, 21, 45, 11, 10, 1, 9, 12, 4, 5, 11, 4, 1, 3, 10, 38, 7, 28},
{17, 69, 67, 16, 13, 10, 30, 3, 7, 3, 9, 4, 19, 5, 6, 13, 1, 7, 37, 32},
{17, 92, 102, 19, 26, 47, 12, 7, 5, 7, 21, 15, 2, 9, 4, 5, 19, 18, 55, 37},
{18, 44, 41, 11, 8, 7, 18, 1, 6, 5, 4, 9, 2, 3, 1, 7, 2, 5, 5, 23, 21},
{18, 54, 71, 26, 28, 19, 7, 5, 8, 15, 5, 3, 4, 2, 1, 1, 7, 6, 7, 28, 26},
{19, 45, 80, 19, 26, 7, 5, 7, 3, 2, 6, 1, 1, 6, 28, 5, 17, 12, 5, 7, 26, 19},
{16, 81, 101, 28, 53, 13, 15, 9, 4, 2, 3, 10, 5, 1, 4, 18, 15, 48, 33},
{16, 90, 71, 31, 21, 38, 10, 11, 40, 1, 12, 5, 33, 1, 4, 10, 3, 7, 17},
{16, 103, 72, 29, 15, 9, 11, 39, 7, 2, 13, 14, 1, 8, 21, 43, 6, 33, 27},
{17, 59, 71, 13, 10, 36, 3, 7, 12, 4, 11, 9, 3, 6, 8, 13, 2, 11, 35, 24},
{16, 93, 84, 37, 18, 38, 9, 5, 4, 1, 3, 4, 2, 5, 10, 3, 8, 47, 46},
{17, 103, 89, 37, 13, 15, 38, 9, 4, 2, 3, 10, 5, 1, 4, 15, 3, 13, 52, 51},
{17, 68, 68, 19, 12, 17, 20, 7, 5, 19, 3, 26, 23, 12, 7, 5, 25, 23, 3, 20},
{17, 80, 89, 20, 14, 22, 24, 6, 8, 26, 28, 2, 26, 22, 4, 19, 39, 21, 1, 20},
{18, 85, 85, 21, 17, 16, 31, 1, 15, 4, 14, 25, 15, 16, 29, 39, 1, 17, 4, 25, 21},
{17, 36, 44, 12, 11, 13, 1, 7, 3, 7, 6, 1, 12, 4, 1, 9, 7, 8, 19, 17},
{17, 64, 97, 21, 16, 27, 5, 11, 20, 6, 14, 30, 18, 16, 6, 40, 14, 4, 10, 24},
{17, 67, 90, 20, 26, 21, 14, 6, 5, 16, 8, 18, 11, 22, 7, 20, 12, 13, 34, 33},
{17, 73, 78, 22, 20, 31, 2, 7, 11, 16, 8, 3, 4, 10, 1, 47, 14, 2, 12, 26},
{17, 74, 79, 23, 20, 31, 3, 17, 26, 6, 25, 12, 11, 1, 10, 30, 9, 2, 23, 21},
{18, 27, 33, 8, 9, 10, 5, 3, 2, 5, 2, 1, 9, 2, 3, 3, 7, 6, 5, 14, 13},
{18, 33, 40, 12, 9, 12, 4, 5, 6, 5, 1, 2, 10, 4, 1, 8, 1, 8, 7, 18, 15},
{18, 48, 65, 14, 12, 22, 2, 10, 16, 7, 8, 17, 1, 5, 1, 13, 4, 9, 9, 26, 22},
{18, 59, 74, 21, 16, 22, 6, 10, 12, 8, 1, 7, 4, 18, 14, 4, 11, 16, 9, 34, 25},
{18, 66, 75, 15, 28, 23, 8, 7, 1, 6, 9, 7, 16, 4, 17, 11, 2, 9, 13, 36, 30},
{18, 76, 98, 26, 24, 26, 2, 13, 9, 28, 7, 19, 4, 12, 17, 10, 21, 44, 1, 11, 32},
{18, 82, 82, 22, 13, 16, 31, 9, 4, 1, 15, 5, 14, 13, 9, 4, 51, 1, 16, 15, 31},
{18, 85, 88, 20, 36, 29, 11, 9, 2, 7, 7, 22, 13, 8, 27, 15, 21, 37, 2, 25, 23},
{21, 32, 45, 10, 12, 10, 7, 3, 3, 7, 1, 10, 1, 4, 4, 6, 5, 11, 1, 8, 6, 7, 17, 15},
{17, 37, 46, 10, 13, 14, 7, 3, 4, 8, 3, 1, 2, 13, 5, 11, 7, 6, 19, 18},
{17, 44, 60, 13, 11, 20, 2, 9, 15, 12, 17, 11, 4, 7, 4, 5, 3, 1, 23, 21},
{17, 45, 48, 11, 8, 5, 7, 14, 3, 2, 9, 3, 8, 14, 2, 12, 9, 10, 23, 22},
{17, 52, 64, 17, 15, 20, 3, 7, 5, 16, 1, 4, 13, 12, 11, 1, 11, 31, 10, 21},
{17, 56, 74, 16, 18, 22, 14, 2, 7, 9, 4, 5, 21, 5, 2, 16, 19, 6, 31, 25},
{17, 56, 74, 16, 18, 22, 14, 2, 11, 5, 4, 1, 25, 6, 1, 16, 15, 29, 2, 27},
{17, 59, 70, 20, 15, 24, 6, 9, 19, 1, 7, 4, 11, 18, 11, 4, 7, 31, 3, 28},
{17, 62, 74, 22, 15, 25, 7, 8, 20, 8, 1, 7, 2, 8, 19, 12, 3, 11, 32, 30},
{17, 65, 65, 14, 9, 13, 29, 5, 4, 1, 16, 20, 9, 36, 16, 4, 13, 15, 1, 14},
{17, 77, 78, 17, 16, 12, 13, 19, 4, 8, 7, 6, 1, 19, 18, 25, 15, 43, 9, 34},
{17, 80, 111, 29, 20, 31, 9, 11, 36, 2, 20, 24, 14, 6, 2, 22, 8, 46, 12, 34},
{17, 87, 90, 14, 13, 25, 15, 20, 1, 12, 15, 10, 5, 25, 4, 23, 20, 19, 45, 42},
{17, 88, 111, 31, 22, 35, 9, 13, 29, 11, 7, 21, 20, 18, 1, 19, 4, 18, 51, 37},
{18, 50, 51, 10, 7, 11, 9, 13, 3, 4, 5, 4, 13, 12, 3, 1, 16, 9, 28, 6, 22},
{18, 50, 51, 13, 12, 9, 16, 3, 6, 4, 11, 10, 3, 5, 1, 7, 4, 13, 9, 28, 22},
{18, 55, 72, 16, 9, 11, 19, 7, 2, 5, 8, 19, 9, 6, 21, 15, 14, 5, 9, 32, 23},
{18, 57, 80, 20, 16, 21, 7, 4, 5, 17, 3, 3, 1, 27, 13, 1, 12, 18, 7, 32, 25},
{18, 62, 75, 22, 15, 25, 7, 8, 19, 9, 1, 7, 2, 5, 22, 1, 11, 10, 34, 6, 28},
{18, 66, 74, 17, 24, 25, 10, 7, 3, 16, 11, 1, 9, 17, 13, 1, 8, 5, 7, 34, 32},
{18, 66, 85, 18, 20, 28, 16, 2, 14, 8, 6, 9, 21, 21, 12, 3, 12, 9, 3, 36, 30},

```



```

{18, 67, 78, 22, 21, 24, 3, 8, 7, 3, 20, 2, 5, 4, 23, 11, 13, 3, 8, 36, 31},
{18, 74, 87, 22, 15, 12, 25, 3, 9, 7, 11, 5, 4, 25, 4, 1, 28, 21, 40, 6, 34},
{18, 74, 87, 25, 21, 28, 4, 11, 6, 22, 7, 5, 1, 4, 25, 15, 12, 3, 9, 40, 34},
{18, 75, 102, 26, 20, 29, 6, 5, 9, 1, 4, 19, 14, 11, 31, 5, 20, 24, 9, 42, 33},
{18, 82, 105, 25, 14, 18, 25, 10, 4, 15, 7, 1, 9, 26, 32, 24, 20, 6, 14, 48, 34},
{19, 26, 29, 7, 6, 5, 8, 2, 3, 1, 4, 1, 8, 3, 2, 9, 5, 4, 1, 3, 14, 12},
{20, 47, 55, 12, 7, 6, 7, 15, 1, 4, 1, 5, 3, 8, 2, 5, 19, 11, 17, 5, 6, 24, 23},
{17, 55, 81, 17, 20, 18, 14, 3, 2, 16, 11, 14, 22, 3, 13, 20, 6, 7, 28, 27},
{17, 65, 78, 22, 17, 26, 5, 12, 20, 7, 3, 23, 13, 9, 4, 5, 36, 1, 6, 29},
{17, 76, 79, 16, 13, 21, 26, 3, 10, 19, 2, 14, 5, 12, 10, 21, 44, 1, 11, 32},
{18, 53, 71, 14, 20, 19, 9, 5, 4, 1, 1, 18, 3, 19, 16, 5, 13, 32, 3, 8, 21},
{19, 28, 32, 10, 7, 11, 3, 4, 12, 1, 7, 4, 5, 3, 1, 6, 6, 4, 10, 2, 10, 8},
{18, 60, 68, 19, 13, 28, 6, 7, 24, 1, 8, 15, 21, 25, 9, 5, 4, 1, 3, 19, 16},
{18, 80, 80, 20, 15, 16, 29, 9, 5, 1, 4, 13, 16, 4, 9, 13, 51, 15, 1, 14, 29},
{17, 45, 59, 13, 12, 20, 4, 8, 10, 3, 7, 3, 9, 16, 14, 6, 8, 7, 23, 22},
{17, 50, 52, 13, 15, 22, 8, 5, 3, 5, 7, 3, 5, 3, 2, 11, 1, 30, 9, 20},
{17, 51, 64, 16, 14, 21, 2, 12, 8, 10, 5, 16, 6, 2, 4, 14, 11, 10, 27, 24},
{17, 57, 98, 28, 29, 17, 10, 1, 9, 21, 7, 12, 24, 13, 20, 6, 7, 29, 1, 28},
{17, 59, 70, 18, 17, 24, 1, 9, 7, 19, 2, 9, 20, 11, 4, 5, 33, 1, 6, 26},
{17, 60, 84, 17, 15, 28, 2, 13, 19, 8, 33, 27, 3, 7, 23, 21, 5, 1, 4, 16},
{17, 60, 86, 18, 15, 27, 3, 12, 12, 9, 3, 19, 26, 15, 14, 1, 13, 7, 33, 27},
{17, 60, 90, 16, 15, 29, 1, 14, 17, 4, 12, 27, 13, 8, 5, 15, 18, 8, 34, 26},
{17, 64, 72, 19, 21, 24, 17, 2, 15, 8, 4, 20, 1, 3, 7, 2, 5, 36, 8, 28},
{17, 66, 92, 20, 17, 29, 5, 12, 18, 2, 7, 9, 12, 27, 24, 3, 15, 6, 36, 30},
{17, 67, 67, 19, 11, 9, 28, 2, 7, 8, 5, 12, 20, 7, 5, 2, 3, 39, 8, 28},
{17, 69, 97, 15, 19, 35, 11, 4, 7, 16, 18, 9, 16, 26, 20, 7, 13, 10, 36, 33},
{17, 69, 112, 22, 20, 27, 2, 11, 7, 24, 4, 30, 15, 28, 11, 17, 24, 38, 7, 31},
{17, 70, 70, 23, 18, 29, 3, 4, 11, 2, 1, 5, 18, 7, 3, 2, 1, 41, 11, 29},
{17, 73, 90, 14, 12, 22, 25, 2, 10, 16, 8, 21, 3, 28, 24, 11, 10, 1, 37, 36},
{17, 73, 97, 20, 22, 31, 18, 2, 10, 14, 5, 26, 6, 4, 2, 21, 26, 7, 40, 33},
{17, 74, 92, 20, 23, 31, 17, 3, 10, 16, 8, 23, 4, 6, 19, 2, 17, 15, 38, 36},
{17, 74, 104, 22, 17, 35, 5, 12, 20, 7, 13, 6, 12, 29, 28, 5, 17, 6, 40, 34},
{17, 76, 77, 27, 17, 32, 9, 8, 1, 7, 1, 3, 6, 19, 7, 2, 5, 45, 12, 31},
{17, 79, 112, 19, 28, 32, 12, 7, 5, 2, 3, 23, 4, 20, 36, 26, 17, 9, 44, 35},
{18, 21, 30, 5, 6, 10, 4, 1, 3, 4, 6, 1, 6, 9, 5, 1, 4, 3, 1, 11, 10},
{18, 32, 35, 10, 8, 14, 2, 6, 5, 3, 4, 2, 1, 4, 21, 4, 3, 1, 6, 5, 11},
{18, 39, 48, 12, 11, 16, 2, 9, 7, 4, 1, 3, 3, 4, 4, 12, 10, 9, 8, 20, 19},
{18, 45, 58, 16, 13, 16, 3, 10, 19, 7, 9, 8, 7, 2, 11, 1, 6, 4, 5, 23, 22},
{18, 50, 78, 21, 29, 12, 9, 1, 8, 20, 3, 7, 11, 4, 7, 12, 13, 5, 8, 29, 21},
{18, 53, 65, 18, 16, 19, 2, 14, 20, 8, 11, 3, 5, 8, 9, 2, 9, 7, 27, 1, 26},
{18, 67, 78, 23, 21, 23, 2, 5, 10, 4, 22, 3, 2, 21, 6, 8, 3, 13, 11, 34, 33},
{18, 68, 98, 25, 18, 25, 7, 11, 32, 4, 21, 15, 13, 2, 11, 12, 41, 14, 1, 13, 27},
{18, 72, 76, 21, 20, 31, 1, 8, 11, 10, 12, 5, 3, 7, 3, 45, 1, 16, 4, 11, 27},
{18, 76, 114, 26, 19, 31, 7, 12, 15, 13, 5, 8, 40, 2, 19, 17, 23, 13, 10, 43, 33},
{18, 86, 86, 15, 14, 22, 35, 1, 13, 16, 9, 13, 4, 9, 20, 5, 4, 1, 51, 15, 35},
{18, 87, 87, 28, 20, 39, 7, 5, 8, 2, 3, 9, 20, 8, 11, 12, 5, 2, 48, 7, 39},
{18, 87, 87, 28, 20, 39, 8, 12, 20, 9, 7, 5, 7, 2, 5, 11, 3, 2, 48, 8, 39},
{21, 32, 32, 11, 7, 14, 3, 4, 1, 2, 7, 3, 2, 1, 3, 1, 2, 1, 2, 4, 1, 18, 3, 14},
{17, 29, 47, 13, 16, 8, 5, 2, 6, 8, 3, 4, 10, 1, 9, 2, 10, 16, 3, 13},
{17, 41, 45, 10, 8, 9, 14, 2, 5, 1, 4, 6, 12, 9, 1, 13, 7, 23, 5, 18},

```

```

{17, 43, 48, 7, 8, 12, 16, 6, 1, 5, 4, 12, 4, 11, 7, 13, 1, 6, 24, 19},
{17, 46, 62, 13, 15, 18, 11, 2, 9, 5, 3, 2, 19, 7, 17, 3, 10, 4, 25, 21},
{17, 46, 65, 12, 13, 21, 11, 1, 6, 8, 4, 2, 17, 14, 15, 3, 11, 27, 8, 19},
{17, 48, 72, 20, 28, 12, 8, 4, 7, 13, 12, 13, 3, 10, 1, 11, 4, 10, 27, 21},
{17, 52, 91, 17, 13, 22, 4, 9, 16, 5, 11, 25, 27, 13, 12, 1, 11, 31, 10, 21},
{17, 53, 83, 23, 30, 16, 7, 8, 15, 14, 1, 7, 17, 1, 13, 11, 12, 27, 1, 26},
{17, 54, 92, 23, 31, 15, 8, 7, 5, 8, 19, 2, 3, 24, 11, 12, 18, 30, 6, 24},
{17, 58, 69, 18, 17, 23, 1, 7, 9, 19, 3, 20, 5, 2, 3, 11, 8, 32, 6, 26},
{17, 59, 77, 17, 20, 22, 14, 3, 11, 10, 2, 24, 1, 9, 18, 8, 10, 7, 31, 28},
{17, 62, 74, 21, 19, 22, 2, 12, 5, 23, 2, 20, 7, 8, 11, 5, 3, 2, 32, 30},
{17, 64, 68, 16, 11, 18, 19, 4, 7, 1, 3, 17, 15, 12, 1, 20, 3, 9, 35, 29},
{17, 64, 72, 16, 12, 11, 25, 1, 10, 4, 9, 20, 15, 4, 10, 19, 1, 9, 36, 28},
{17, 72, 85, 24, 17, 31, 6, 11, 1, 5, 21, 4, 17, 3, 12, 22, 2, 10, 40, 32},
{17, 72, 85, 25, 21, 26, 4, 6, 11, 27, 2, 6, 20, 8, 3, 14, 11, 6, 39, 33},
{17, 75, 102, 32, 43, 13, 8, 11, 5, 3, 20, 14, 23, 18, 5, 9, 1, 4, 39, 36},
{17, 83, 101, 22, 25, 36, 19, 3, 17, 11, 19, 28, 14, 5, 4, 13, 9, 46, 9, 37},
{18, 39, 49, 10, 13, 16, 7, 3, 4, 8, 4, 1, 15, 11, 5, 7, 1, 6, 21, 3, 18},
{18, 45, 75, 8, 9, 13, 15, 7, 1, 6, 4, 15, 2, 13, 17, 24, 4, 21, 23, 1, 22},
{18, 45, 75, 13, 9, 8, 15, 1, 7, 4, 6, 15, 2, 13, 17, 24, 4, 21, 23, 1, 22},
{18, 51, 56, 11, 6, 7, 12, 15, 5, 1, 3, 5, 1, 2, 17, 16, 3, 18, 28, 5, 23},
{18, 59, 65, 15, 13, 11, 20, 2, 9, 2, 8, 5, 17, 3, 2, 12, 19, 11, 33, 7, 26},
{18, 80, 104, 24, 20, 36, 4, 16, 13, 7, 8, 6, 1, 5, 4, 25, 31, 24, 43, 6, 37},
{18, 86, 99, 23, 30, 33, 15, 8, 1, 21, 8, 9, 5, 28, 13, 2, 13, 11, 48, 10, 38},
{19, 28, 35, 7, 9, 12, 5, 2, 3, 5, 3, 8, 2, 3, 10, 6, 1, 4, 1, 3, 15, 13},
{19, 58, 72, 15, 21, 22, 5, 4, 6, 1, 3, 6, 1, 5, 20, 1, 4, 23, 15, 31, 4, 27},
{19, 58, 72, 21, 15, 22, 4, 5, 6, 3, 1, 6, 20, 1, 5, 1, 4, 23, 15, 31, 4, 27},
{17, 30, 36, 9, 5, 6, 10, 4, 1, 3, 4, 16, 14, 2, 12, 11, 4, 1, 3, 7},
{17, 31, 48, 12, 19, 5, 7, 3, 2, 1, 5, 9, 13, 4, 9, 5, 4, 1, 16, 15},
{17, 34, 37, 9, 8, 17, 1, 3, 4, 6, 4, 2, 1, 5, 2, 4, 8, 6, 20, 14},
{17, 39, 41, 7, 6, 8, 18, 4, 2, 4, 3, 10, 1, 6, 5, 9, 2, 7, 23, 16},
{17, 40, 65, 12, 10, 18, 2, 8, 9, 5, 4, 1, 3, 24, 16, 11, 5, 6, 23, 17},
{17, 45, 78, 16, 11, 18, 4, 7, 1, 3, 15, 2, 13, 17, 24, 4, 21, 23, 1, 22},
{17, 48, 79, 20, 28, 12, 8, 4, 8, 24, 11, 5, 1, 7, 6, 15, 9, 6, 27, 21},
{17, 49, 54, 12, 14, 23, 10, 2, 7, 9, 5, 2, 6, 4, 3, 31, 2, 10, 8, 18},
{17, 54, 61, 11, 14, 29, 8, 3, 5, 12, 6, 7, 5, 1, 4, 13, 3, 32, 9, 22},
{17, 56, 60, 8, 11, 9, 28, 5, 3, 2, 7, 2, 9, 5, 7, 12, 16, 8, 32, 24},
{17, 60, 64, 12, 20, 28, 7, 5, 2, 3, 8, 1, 7, 9, 8, 13, 2, 36, 11, 24},
{17, 60, 90, 19, 15, 26, 4, 11, 15, 8, 1, 3, 33, 7, 2, 5, 27, 2, 31, 29},
{17, 62, 62, 13, 6, 5, 9, 29, 1, 4, 7, 13, 20, 6, 7, 5, 1, 4, 33, 29},
{17, 63, 70, 14, 15, 34, 13, 1, 7, 9, 5, 2, 3, 8, 16, 5, 11, 2, 36, 27},
{17, 65, 65, 13, 8, 12, 32, 5, 3, 2, 1, 13, 20, 8, 5, 3, 2, 1, 33, 32},
{17, 67, 69, 17, 18, 32, 12, 5, 4, 14, 9, 10, 2, 8, 3, 2, 7, 37, 5, 30},
{17, 67, 69, 21, 15, 31, 5, 10, 1, 4, 19, 3, 6, 1, 5, 6, 10, 1, 38, 29},
{17, 67, 70, 11, 12, 14, 30, 10, 1, 11, 2, 16, 8, 2, 6, 7, 14, 13, 40, 27},
{17, 68, 68, 10, 9, 17, 32, 1, 8, 11, 4, 10, 11, 15, 9, 1, 8, 4, 36, 32},
{17, 68, 68, 21, 15, 32, 6, 9, 15, 8, 4, 1, 8, 5, 7, 1, 6, 4, 36, 32},
{17, 68, 74, 18, 15, 35, 3, 12, 12, 9, 3, 10, 8, 15, 4, 39, 8, 2, 6, 29},
{17, 69, 69, 20, 8, 11, 30, 5, 3, 2, 12, 7, 19, 8, 5, 7, 11, 2, 39, 30},
{17, 69, 76, 19, 15, 35, 4, 11, 14, 9, 2, 9, 4, 7, 1, 3, 15, 13, 41, 28},
{17, 70, 70, 20, 19, 31, 1, 3, 8, 7, 19, 2, 5, 2, 5, 12, 1, 3, 39, 31},

```

```

{17, 70, 70, 21, 17, 32, 4, 6, 7, 17, 8, 5, 1, 8, 1, 4, 9, 6, 38, 32},
{17, 71, 107, 32, 39, 25, 7, 16, 30, 2, 14, 17, 10, 7, 3, 1, 5, 38, 4, 33},
{17, 72, 76, 16, 9, 11, 36, 7, 2, 13, 15, 8, 9, 12, 13, 2, 11, 8, 40, 32},
{17, 72, 76, 17, 21, 34, 11, 6, 2, 6, 13, 5, 3, 2, 1, 7, 18, 12, 42, 30},
{17, 72, 103, 17, 13, 15, 27, 4, 7, 2, 5, 12, 18, 3, 15, 39, 33, 2, 37, 35},
{17, 76, 78, 23, 15, 38, 8, 7, 1, 6, 19, 8, 5, 3, 8, 11, 6, 2, 40, 36},
{17, 79, 81, 7, 8, 12, 16, 36, 6, 1, 5, 4, 12, 4, 11, 20, 23, 11, 45, 34},
{17, 91, 98, 22, 24, 45, 15, 7, 5, 9, 10, 8, 4, 12, 1, 11, 23, 15, 53, 38},
{17, 93, 94, 28, 21, 44, 7, 14, 23, 12, 5, 9, 11, 6, 3, 50, 5, 1, 4, 43},
{18, 31, 33, 9, 8, 14, 2, 6, 5, 3, 1, 3, 2, 1, 3, 1, 7, 2, 19, 5, 12},
{18, 38, 42, 9, 10, 19, 5, 3, 1, 2, 9, 2, 3, 6, 1, 4, 1, 8, 23, 7, 15},
{18, 56, 63, 15, 14, 27, 1, 13, 9, 7, 2, 5, 8, 3, 5, 7, 36, 11, 2, 9, 20},
{18, 64, 67, 11, 9, 16, 28, 2, 7, 8, 5, 3, 13, 12, 11, 1, 39, 1, 13, 12, 25},
{18, 64, 67, 18, 17, 29, 5, 12, 9, 5, 4, 2, 7, 4, 1, 3, 14, 2, 12, 38, 26},
{18, 79, 83, 19, 22, 38, 16, 3, 9, 16, 4, 5, 14, 5, 1, 4, 2, 11, 45, 9, 34},
{18, 80, 80, 16, 9, 11, 8, 36, 3, 5, 7, 2, 5, 9, 2, 7, 28, 16, 8, 44, 36},
{18, 80, 83, 16, 11, 18, 35, 4, 7, 1, 3, 15, 2, 13, 17, 20, 8, 4, 48, 12, 32},
{18, 82, 82, 24, 23, 35, 1, 3, 7, 12, 23, 2, 5, 2, 5, 4, 1, 3, 12, 47, 35},
{18, 86, 86, 28, 19, 39, 7, 12, 2, 5, 19, 11, 9, 8, 8, 3, 47, 2, 7, 5, 39},
{18, 87, 87, 16, 13, 22, 36, 4, 9, 15, 1, 5, 9, 13, 14, 20, 4, 16, 1, 51, 36},
{18, 91, 96, 27, 24, 40, 8, 16, 16, 6, 5, 1, 12, 7, 3, 4, 56, 18, 1, 17, 35},
{18, 98, 101, 14, 11, 8, 20, 45, 3, 5, 3, 9, 2, 7, 17, 11, 25, 28, 14, 56, 42},
{18, 99, 100, 27, 29, 43, 16, 11, 15, 14, 4, 7, 1, 3, 15, 2, 57, 1, 14, 13, 42},
{19, 37, 39, 9, 10, 18, 5, 3, 1, 3, 8, 2, 1, 4, 4, 3, 1, 6, 5, 5, 21, 16},
{19, 52, 53, 15, 13, 24, 7, 6, 8, 4, 3, 1, 2, 5, 1, 5, 10, 7, 1, 6, 29, 23},
{19, 81, 86, 24, 17, 40, 7, 10, 16, 12, 3, 13, 8, 4, 11, 5, 11, 46, 1, 7, 6, 35},
{19, 90, 95, 23, 26, 41, 20, 3, 14, 15, 3, 8, 3, 2, 54, 16, 7, 5, 2, 11, 9, 36},
{19, 98, 99, 29, 12, 14, 43, 7, 3, 2, 1, 15, 4, 11, 28, 1, 1, 14, 13, 14, 56, 42},
{21, 45, 46, 11, 4, 5, 4, 21, 3, 1, 1, 3, 2, 3, 2, 4, 1, 5, 4, 15, 9, 5, 25, 20},
{17, 46, 62, 12, 10, 24, 2, 8, 9, 5, 4, 1, 3, 6, 16, 13, 17, 25, 4, 21},
{17, 50, 68, 19, 31, 10, 9, 1, 5, 3, 11, 2, 9, 8, 15, 7, 1, 7, 28, 22},
{17, 51, 71, 22, 29, 12, 10, 3, 9, 17, 2, 5, 6, 11, 3, 8, 7, 8, 26, 25},
{17, 58, 87, 21, 37, 11, 10, 4, 6, 8, 3, 5, 2, 3, 19, 23, 16, 31, 4, 27},
{17, 59, 77, 28, 31, 19, 9, 5, 9, 17, 1, 4, 10, 5, 8, 2, 3, 30, 1, 29},
{17, 62, 93, 27, 35, 15, 7, 5, 2, 3, 8, 1, 11, 28, 19, 4, 15, 32, 2, 30},
{17, 69, 94, 32, 37, 27, 5, 14, 11, 7, 10, 4, 3, 13, 3, 12, 8, 9, 35, 34},
{17, 76, 100, 19, 21, 36, 16, 3, 1, 5, 15, 4, 9, 24, 1, 23, 29, 41, 6, 35},
{18, 64, 85, 29, 35, 23, 6, 10, 12, 19, 7, 3, 1, 4, 7, 4, 1, 3, 33, 2, 31},
{18, 67, 90, 31, 36, 26, 5, 10, 11, 20, 5, 4, 1, 3, 9, 1, 6, 6, 1, 34, 33},
{19, 65, 80, 16, 20, 29, 12, 4, 8, 7, 9, 5, 2, 16, 4, 3, 15, 22, 12, 36, 7, 29},
{20, 30, 37, 7, 8, 15, 6, 1, 4, 5, 1, 3, 7, 2, 3, 5, 1, 5, 9, 4, 17, 4, 13},
{17, 55, 65, 21, 34, 11, 10, 1, 4, 5, 9, 3, 3, 31, 6, 1, 5, 1, 4, 24},
{17, 62, 67, 9, 7, 12, 34, 2, 5, 11, 8, 9, 18, 1, 10, 7, 3, 4, 33, 29},
{17, 63, 107, 25, 38, 12, 13, 6, 5, 1, 4, 12, 36, 1, 8, 7, 27, 3, 33, 30},
{17, 79, 95, 30, 49, 12, 4, 5, 9, 3, 1, 2, 4, 5, 3, 10, 20, 13, 46, 33},
{17, 80, 95, 32, 48, 15, 17, 8, 7, 1, 47, 5, 13, 1, 3, 8, 7, 2, 5, 33},
{17, 82, 102, 30, 52, 17, 13, 4, 9, 9, 4, 3, 5, 1, 2, 5, 18, 50, 14, 32},
{17, 86, 103, 33, 53, 12, 5, 3, 4, 9, 2, 1, 5, 7, 3, 11, 22, 14, 50, 36},
{18, 80, 92, 32, 48, 11, 9, 12, 2, 7, 13, 3, 5, 4, 1, 2, 8, 8, 44, 7, 36},
{19, 86, 106, 30, 56, 14, 16, 12, 2, 7, 11, 3, 4, 14, 1, 1, 5, 50, 13, 4, 9, 36},

```

```

{16, 23, 39, 11, 12, 7, 4, 4, 8, 3, 1, 5, 10, 1, 7, 6, 1, 12, 11},
{16, 41, 73, 17, 24, 11, 6, 5, 1, 25, 16, 12, 4, 3, 1, 2, 24, 5, 17},
{17, 30, 45, 8, 7, 15, 1, 6, 9, 4, 2, 17, 13, 7, 6, 4, 13, 1, 9, 8},
{17, 37, 74, 16, 21, 11, 5, 6, 20, 17, 7, 13, 13, 4, 5, 6, 4, 1, 20, 17},
{16, 74, 103, 23, 19, 32, 4, 15, 27, 2, 30, 17, 20, 7, 6, 11, 13, 41, 33},
{17, 25, 51, 12, 13, 9, 3, 2, 11, 5, 1, 4, 7, 3, 4, 14, 11, 1, 13, 12},
{17, 35, 58, 9, 8, 18, 1, 7, 10, 4, 3, 21, 14, 9, 5, 4, 1, 3, 19, 16},
{18, 59, 126, 28, 31, 18, 7, 3, 4, 30, 11, 14, 15, 13, 1, 12, 34, 25, 3, 31, 28},
{18, 28, 48, 10, 7, 11, 3, 4, 13, 15, 10, 3, 4, 5, 9, 3, 1, 2, 4, 15, 13},
{18, 31, 59, 13, 18, 8, 5, 3, 5, 15, 9, 2, 7, 13, 3, 7, 11, 3, 4, 16, 15},
{19, 24, 43, 7, 6, 11, 1, 5, 8, 4, 12, 7, 5, 2, 3, 8, 1, 7, 9, 13, 2, 11},
{16, 57, 87, 25, 32, 16, 9, 7, 25, 4, 5, 3, 1, 13, 19, 8, 5, 30, 27},
{16, 58, 88, 27, 31, 19, 8, 4, 27, 12, 14, 5, 4, 8, 9, 5, 3, 30, 28},
{16, 71, 106, 31, 40, 18, 13, 11, 29, 5, 8, 23, 1, 10, 9, 11, 8, 37, 34},
{16, 72, 112, 20, 16, 36, 4, 12, 24, 7, 5, 2, 3, 9, 39, 33, 2, 37, 35},
{16, 74, 79, 17, 23, 34, 9, 8, 12, 11, 1, 7, 10, 4, 3, 45, 15, 14, 29},
{18, 62, 108, 27, 35, 15, 7, 5, 2, 3, 8, 1, 39, 23, 15, 8, 7, 1, 6, 34, 28},
{19, 46, 70, 21, 25, 11, 6, 4, 3, 6, 20, 5, 1, 4, 1, 5, 17, 4, 9, 4, 25, 21},
{18, 43, 40, 12, 8, 23, 3, 5, 1, 2, 13, 7, 3, 4, 2, 1, 6, 17, 5, 15, 11},
{18, 84, 73, 28, 13, 9, 34, 4, 5, 15, 2, 1, 4, 3, 7, 3, 4, 45, 1, 5, 39},
{19, 63, 57, 25, 12, 26, 4, 3, 5, 1, 2, 5, 3, 4, 2, 1, 4, 1, 5, 3, 32, 31},
{17, 45, 61, 13, 12, 20, 4, 8, 10, 3, 7, 11, 17, 17, 5, 6, 4, 1, 24, 21},
{18, 54, 62, 16, 15, 23, 4, 11, 13, 3, 7, 3, 20, 3, 18, 16, 1, 19, 1, 18, 17},
{18, 65, 109, 31, 34, 19, 12, 14, 20, 7, 5, 2, 11, 6, 28, 5, 21, 16, 3, 34, 31},
{17, 25, 32, 8, 7, 10, 2, 5, 7, 1, 3, 2, 8, 4, 6, 6, 1, 5, 14, 11},
{17, 31, 44, 9, 8, 14, 1, 7, 10, 1, 13, 3, 5, 1, 2, 11, 7, 3, 17, 14},
{17, 72, 109, 27, 17, 28, 10, 7, 3, 4, 40, 32, 5, 8, 19, 2, 3, 42, 11, 30},
{17, 75, 98, 21, 23, 31, 19, 2, 14, 11, 3, 28, 14, 3, 11, 22, 14, 11, 39, 36},
{18, 31, 57, 11, 9, 11, 2, 7, 13, 4, 7, 1, 3, 8, 10, 17, 4, 14, 16, 1, 15},
{18, 55, 97, 19, 17, 19, 2, 15, 21, 8, 11, 5, 3, 14, 8, 12, 29, 26, 28, 1, 27},
{18, 58, 114, 26, 32, 20, 6, 13, 25, 1, 12, 21, 10, 27, 19, 12, 7, 5, 2, 30, 28},
{18, 80, 108, 24, 20, 36, 4, 16, 28, 21, 31, 17, 7, 4, 3, 1, 12, 10, 10, 41, 39},
{19, 35, 64, 16, 19, 8, 5, 3, 2, 6, 14, 3, 4, 11, 10, 2, 12, 13, 10, 3, 19, 16},
{19, 53, 100, 26, 27, 12, 13, 1, 10, 18, 2, 8, 11, 1, 10, 6, 4, 28, 25, 1, 27, 26},
{17, 33, 54, 14, 19, 9, 5, 4, 12, 8, 13, 3, 5, 1, 2, 5, 8, 7, 18, 15},
{17, 48, 77, 17, 12, 19, 5, 7, 20, 2, 28, 12, 8, 6, 2, 30, 10, 2, 8, 18},
{17, 48, 79, 14, 15, 19, 13, 1, 12, 4, 23, 25, 7, 16, 3, 4, 27, 1, 5, 21},
{17, 54, 61, 14, 9, 13, 18, 5, 4, 11, 6, 19, 1, 17, 7, 9, 2, 9, 28, 26},
{17, 55, 98, 27, 28, 20, 7, 6, 22, 13, 23, 7, 3, 4, 21, 11, 5, 6, 28, 27},
{17, 75, 106, 26, 20, 29, 11, 9, 21, 5, 38, 16, 23, 14, 9, 5, 4, 1, 39, 36},
{18, 25, 34, 7, 4, 5, 9, 3, 1, 2, 4, 12, 13, 8, 4, 1, 12, 5, 7, 1, 6},
{18, 40, 56, 14, 11, 15, 7, 4, 10, 4, 19, 6, 5, 1, 4, 14, 3, 7, 4, 22, 18},
{18, 74, 80, 16, 15, 22, 21, 4, 11, 13, 3, 7, 1, 20, 4, 19, 3, 19, 16, 39, 35},
{19, 42, 71, 20, 22, 13, 5, 2, 3, 8, 13, 8, 3, 5, 18, 6, 4, 14, 10, 2, 22, 20},
{19, 57, 88, 15, 17, 25, 13, 2, 11, 8, 3, 30, 12, 15, 9, 3, 6, 12, 15, 9, 33, 24},
{19, 57, 95, 13, 16, 11, 17, 5, 6, 9, 4, 1, 20, 5, 23, 14, 30, 4, 27, 29, 1, 28},
{18, 40, 46, 14, 9, 17, 5, 4, 1, 3, 18, 2, 5, 4, 13, 9, 6, 16, 14, 4, 10},
{18, 60, 79, 15, 16, 29, 11, 4, 3, 13, 7, 18, 15, 27, 17, 16, 4, 23, 1, 19, 18},
{17, 41, 49, 14, 11, 16, 4, 7, 13, 1, 5, 2, 14, 2, 7, 7, 2, 5, 22, 19},
{17, 42, 68, 15, 27, 7, 8, 6, 1, 5, 4, 13, 18, 11, 10, 1, 9, 5, 23, 19},

```

```

{17, 46, 74, 19, 27, 11, 8, 4, 10, 21, 10, 1, 5, 4, 1, 11, 14, 6, 26, 20},
{17, 55, 89, 16, 15, 24, 1, 5, 9, 13, 4, 9, 33, 22, 15, 7, 1, 32, 8, 23},
{17, 59, 63, 18, 15, 26, 4, 11, 11, 6, 1, 5, 4, 7, 37, 1, 3, 12, 10, 22},
{17, 62, 104, 25, 37, 16, 9, 6, 3, 8, 32, 1, 5, 17, 13, 19, 11, 8, 35, 27},
{17, 63, 89, 13, 11, 15, 24, 2, 9, 15, 6, 9, 8, 1, 7, 33, 30, 1, 32, 31},
{17, 65, 94, 19, 16, 30, 3, 13, 22, 12, 1, 31, 21, 13, 8, 5, 3, 2, 33, 32},
{17, 68, 74, 18, 19, 31, 10, 8, 7, 12, 4, 11, 8, 2, 6, 43, 13, 1, 12, 25},
{17, 69, 115, 29, 40, 16, 13, 4, 36, 3, 8, 2, 6, 19, 14, 21, 12, 9, 39, 30},
{17, 71, 110, 32, 39, 20, 12, 5, 34, 17, 11, 9, 2, 15, 9, 13, 6, 3, 37, 34},
{17, 79, 110, 37, 42, 18, 19, 15, 27, 17, 1, 16, 4, 3, 12, 7, 5, 2, 41, 38},
{17, 82, 116, 37, 45, 21, 16, 16, 29, 5, 11, 18, 8, 3, 13, 2, 12, 10, 42, 40},
{17, 105, 88, 26, 19, 23, 37, 7, 12, 9, 14, 33, 11, 1, 10, 51, 21, 29, 4, 25},
{18, 35, 53, 15, 20, 10, 5, 4, 6, 15, 1, 3, 11, 1, 5, 4, 5, 4, 1, 18, 17},
{18, 38, 58, 17, 21, 13, 4, 8, 17, 1, 3, 4, 10, 4, 2, 1, 5, 6, 2, 20, 18},
{18, 44, 68, 19, 25, 12, 7, 1, 4, 20, 5, 3, 2, 5, 16, 3, 8, 5, 3, 23, 21},
{18, 49, 95, 23, 26, 12, 11, 8, 18, 1, 8, 10, 13, 6, 2, 4, 26, 23, 1, 25, 24},
{18, 53, 86, 23, 30, 12, 11, 4, 26, 1, 14, 13, 15, 7, 5, 2, 3, 8, 1, 30, 23},
{18, 66, 102, 27, 39, 14, 13, 1, 13, 25, 1, 13, 15, 1, 12, 3, 11, 18, 10, 38, 28},
{18, 73, 120, 28, 45, 16, 12, 4, 3, 5, 1, 2, 21, 18, 34, 2, 16, 23, 9, 41, 32},
{18, 82, 93, 20, 11, 13, 15, 23, 9, 2, 15, 7, 8, 29, 6, 1, 32, 21, 44, 6, 38},
{19, 31, 34, 9, 8, 14, 2, 6, 5, 3, 1, 3, 2, 1, 4, 4, 3, 20, 1, 6, 5, 11},
{19, 41, 72, 16, 25, 7, 9, 5, 2, 3, 11, 22, 8, 11, 8, 5, 3, 9, 2, 25, 7, 16},
{19, 65, 57, 12, 10, 18, 25, 2, 8, 9, 5, 4, 1, 20, 7, 13, 32, 9, 4, 5, 19, 14},
{19, 68, 100, 32, 36, 16, 11, 5, 1, 7, 28, 6, 5, 6, 13, 20, 1, 7, 12, 8, 36, 32},
{20, 27, 40, 12, 15, 7, 5, 4, 11, 2, 3, 8, 1, 1, 3, 3, 2, 1, 4, 4, 1, 14, 13},
{20, 76, 90, 20, 11, 8, 11, 26, 5, 3, 9, 2, 14, 7, 31, 5, 18, 1, 27, 8, 10, 39, 37},
{17, 45, 86, 20, 25, 15, 5, 10, 8, 12, 2, 6, 27, 2, 10, 8, 18, 24, 3, 21},
{17, 59, 72, 19, 15, 25, 4, 11, 23, 7, 18, 5, 6, 4, 1, 3, 11, 7, 30, 29},
{17, 69, 75, 17, 13, 15, 24, 4, 9, 7, 8, 21, 16, 7, 1, 6, 19, 13, 37, 32},
{17, 81, 112, 29, 20, 32, 9, 11, 38, 10, 1, 9, 24, 19, 4, 20, 7, 16, 45, 36},
{18, 53, 72, 15, 17, 21, 13, 2, 15, 4, 25, 9, 4, 6, 13, 8, 1, 7, 27, 1, 26},
{18, 69, 78, 19, 14, 36, 5, 9, 20, 4, 13, 7, 42, 12, 5, 3, 2, 1, 8, 7, 27},
{18, 83, 77, 17, 24, 42, 12, 5, 3, 2, 1, 25, 4, 16, 7, 35, 12, 4, 8, 28, 20},
{19, 28, 34, 9, 8, 11, 1, 4, 3, 10, 1, 3, 10, 3, 2, 1, 4, 4, 1, 3, 15, 13},
{19, 36, 64, 11, 9, 16, 2, 7, 8, 5, 3, 5, 20, 9, 2, 7, 16, 8, 12, 20, 4, 16},
{19, 69, 51, 23, 11, 10, 25, 1, 9, 12, 4, 5, 28, 6, 5, 4, 1, 26, 1, 8, 7, 15},
{20, 51, 62, 16, 14, 21, 2, 7, 5, 18, 3, 2, 6, 1, 5, 18, 4, 1, 8, 7, 28, 5, 23},
{18, 87, 93, 23, 25, 39, 21, 2, 13, 14, 12, 1, 54, 16, 5, 4, 1, 3, 10, 7, 33},
{17, 50, 92, 19, 31, 10, 9, 1, 5, 3, 11, 2, 32, 7, 18, 13, 5, 8, 29, 21},
{17, 54, 92, 24, 30, 10, 8, 6, 3, 33, 2, 5, 1, 4, 12, 9, 21, 4, 29, 25},
{17, 57, 73, 20, 37, 8, 12, 5, 3, 2, 1, 8, 5, 7, 6, 36, 12, 3, 9, 21},
{17, 60, 76, 21, 39, 11, 10, 4, 6, 8, 3, 5, 2, 6, 2, 4, 37, 13, 10, 23},
{17, 62, 108, 24, 38, 10, 14, 6, 4, 3, 16, 37, 5, 1, 4, 9, 25, 4, 33, 29},
{17, 70, 87, 23, 47, 12, 11, 1, 10, 13, 7, 3, 10, 40, 9, 4, 1, 6, 5, 30},
{17, 82, 91, 21, 19, 42, 6, 13, 17, 4, 10, 3, 10, 3, 10, 20, 3, 49, 13, 33},
{18, 53, 51, 14, 8, 11, 20, 5, 3, 5, 9, 1, 4, 15, 1, 4, 5, 2, 31, 7, 22},
{18, 53, 60, 19, 15, 19, 6, 9, 16, 3, 6, 13, 1, 5, 4, 8, 1, 7, 9, 28, 25},
{18, 57, 71, 21, 36, 10, 6, 5, 1, 4, 4, 3, 7, 8, 6, 1, 35, 2, 12, 10, 22},
{18, 80, 76, 25, 7, 8, 12, 28, 6, 1, 5, 4, 16, 11, 7, 4, 19, 6, 48, 13, 32},
{18, 80, 84, 20, 24, 36, 13, 7, 4, 8, 12, 6, 1, 5, 1, 7, 19, 6, 48, 13, 32},

```

```

{18, 83, 101, 30, 53, 11, 8, 11, 5, 3, 9, 2, 14, 7, 16, 5, 48, 11, 3, 8, 35},
{19, 62, 62, 19, 15, 28, 4, 5, 6, 15, 7, 1, 5, 1, 7, 1, 4, 8, 1, 34, 5, 28},
{19, 65, 88, 30, 35, 25, 5, 8, 11, 21, 5, 3, 4, 10, 3, 2, 1, 5, 4, 33, 1, 32},
{19, 88, 73, 24, 17, 15, 32, 7, 8, 6, 11, 6, 1, 1, 5, 9, 25, 22, 41, 24, 1, 23},
{20, 33, 34, 5, 6, 8, 14, 4, 1, 3, 4, 2, 6, 5, 2, 1, 5, 3, 7, 1, 20, 6, 13},
{17, 57, 48, 15, 16, 26, 7, 5, 3, 2, 14, 5, 2, 3, 9, 8, 4, 22, 18, 17},
{18, 38, 33, 8, 12, 18, 5, 3, 2, 1, 4, 9, 4, 3, 1, 6, 5, 3, 15, 12, 11},
{18, 55, 48, 13, 16, 26, 8, 5, 2, 14, 7, 5, 3, 2, 1, 8, 7, 4, 22, 18, 15},
{18, 58, 74, 19, 39, 11, 8, 3, 5, 10, 4, 2, 3, 5, 1, 4, 1, 12, 35, 11, 23},
{18, 60, 58, 14, 13, 33, 1, 12, 15, 5, 7, 11, 4, 3, 2, 9, 7, 8, 25, 18, 17},
{18, 79, 98, 26, 53, 14, 12, 2, 10, 10, 6, 4, 2, 7, 5, 14, 2, 11, 45, 9, 34},
{18, 94, 85, 28, 20, 46, 7, 13, 1, 6, 29, 11, 8, 3, 5, 14, 12, 39, 28, 1, 27},
{19, 49, 45, 13, 11, 25, 2, 9, 10, 5, 3, 2, 1, 10, 4, 8, 2, 6, 5, 20, 15, 14},
{17, 60, 62, 10, 9, 13, 28, 1, 8, 11, 4, 9, 4, 8, 15, 3, 6, 11, 34, 26},
{17, 66, 71, 10, 8, 14, 34, 2, 6, 12, 8, 12, 20, 7, 5, 2, 3, 9, 37, 29},
{17, 69, 67, 11, 9, 20, 29, 3, 6, 10, 1, 4, 1, 5, 5, 16, 9, 15, 38, 31},
{17, 69, 76, 14, 8, 10, 37, 6, 2, 12, 13, 7, 6, 1, 13, 19, 11, 2, 39, 30},
{17, 75, 77, 16, 11, 13, 35, 9, 2, 15, 11, 5, 1, 8, 6, 17, 16, 7, 42, 33},
{17, 75, 82, 17, 19, 39, 15, 2, 10, 11, 3, 7, 6, 5, 18, 1, 4, 14, 43, 32},
{17, 85, 80, 24, 9, 8, 13, 31, 3, 5, 7, 2, 5, 18, 12, 20, 4, 16, 49, 36},
{17, 88, 87, 13, 12, 22, 41, 1, 11, 14, 8, 14, 4, 7, 18, 15, 9, 5, 46, 42},
{17, 91, 101, 15, 27, 49, 7, 8, 6, 1, 5, 4, 12, 19, 11, 23, 16, 3, 52, 39},
{17, 93, 102, 20, 24, 49, 8, 5, 7, 3, 21, 3, 2, 12, 11, 23, 17, 4, 53, 40},
{18, 57, 58, 15, 14, 28, 1, 6, 7, 16, 5, 1, 3, 5, 1, 2, 6, 5, 2, 30, 27},
{19, 60, 60, 19, 13, 28, 5, 8, 1, 4, 13, 7, 1, 7, 5, 6, 1, 5, 1, 4, 32, 28},
{19, 66, 74, 12, 19, 35, 7, 5, 3, 2, 6, 1, 5, 16, 4, 1, 8, 7, 15, 12, 39, 27},
{17, 48, 57, 7, 12, 29, 4, 3, 1, 2, 5, 4, 10, 9, 3, 7, 12, 8, 28, 20},
{17, 72, 93, 22, 50, 10, 12, 8, 2, 5, 9, 1, 4, 9, 6, 7, 15, 14, 43, 29},
{17, 78, 99, 25, 53, 13, 12, 3, 9, 11, 2, 5, 4, 1, 3, 7, 18, 14, 46, 32},
{17, 86, 110, 27, 59, 16, 11, 5, 6, 13, 7, 1, 7, 6, 1, 8, 19, 16, 51, 35},
{18, 71, 86, 27, 44, 14, 7, 6, 1, 5, 5, 3, 2, 1, 6, 2, 5, 16, 13, 42, 29},
{19, 68, 60, 25, 5, 4, 7, 27, 1, 3, 6, 4, 6, 8, 2, 8, 6, 2, 4, 6, 35, 33},
{18, 65, 64, 16, 24, 25, 10, 6, 4, 2, 16, 10, 9, 16, 14, 12, 7, 24, 6, 23, 18},
{18, 87, 80, 22, 21, 17, 27, 4, 13, 1, 24, 23, 3, 24, 16, 35, 12, 11, 5, 29, 23},
{19, 49, 56, 16, 13, 20, 6, 7, 13, 3, 9, 8, 19, 4, 13, 10, 3, 7, 17, 2, 17, 15},
{21, 46, 44, 11, 8, 11, 16, 3, 5, 14, 2, 9, 7, 4, 12, 5, 7, 8, 19, 6, 1, 5, 16, 11},
{18, 88, 108, 23, 22, 43, 1, 21, 24, 4, 27, 33, 28, 5, 15, 7, 33, 1, 32, 8, 23},
{18, 40, 53, 12, 11, 17, 1, 10, 13, 4, 13, 5, 9, 11, 2, 1, 4, 3, 6, 23, 17},
{18, 45, 58, 13, 10, 8, 14, 2, 6, 3, 9, 10, 6, 20, 4, 11, 14, 7, 4, 24, 21},
{18, 46, 68, 12, 11, 23, 1, 10, 13, 8, 2, 6, 19, 9, 4, 5, 13, 14, 6, 26, 20},
{18, 49, 48, 14, 16, 19, 12, 2, 10, 8, 6, 13, 7, 1, 7, 22, 6, 1, 5, 16, 11},
{18, 68, 64, 22, 21, 25, 7, 10, 4, 16, 6, 12, 17, 10, 3, 13, 7, 5, 26, 22, 20},
{18, 80, 101, 22, 21, 37, 1, 20, 23, 4, 33, 4, 20, 27, 11, 9, 11, 31, 29, 9, 20},
{19, 52, 84, 24, 28, 16, 8, 4, 11, 13, 5, 7, 3, 2, 1, 17, 2, 20, 15, 4, 28, 24},
{19, 92, 85, 28, 19, 16, 29, 3, 13, 12, 10, 25, 3, 25, 27, 15, 7, 8, 32, 31, 2, 29},
{21, 57, 48, 12, 13, 15, 17, 11, 1, 10, 4, 2, 8, 5, 6, 3, 14, 8, 25, 10, 5, 3, 17, 15},
{18, 32, 41, 9, 10, 13, 8, 1, 5, 6, 3, 10, 2, 3, 2, 7, 10, 5, 4, 18, 14},
{18, 37, 40, 11, 9, 17, 2, 7, 13, 5, 2, 1, 4, 12, 3, 3, 9, 16, 1, 11, 10},
{18, 40, 35, 11, 10, 19, 1, 4, 5, 9, 3, 6, 1, 6, 3, 16, 15, 5, 1, 4, 9},
{18, 45, 56, 12, 15, 18, 9, 3, 6, 7, 5, 5, 13, 2, 3, 15, 9, 8, 5, 25, 20},

```

```

{18, 50, 62, 14, 17, 19, 11, 3, 6, 10, 4, 2, 17, 6, 2, 4, 13, 11, 9, 26, 24},
{18, 60, 95, 21, 15, 24, 6, 9, 17, 10, 10, 23, 7, 3, 13, 24, 15, 21, 33, 6, 27},
{18, 74, 59, 16, 10, 14, 34, 6, 4, 18, 22, 7, 11, 9, 25, 21, 1, 8, 4, 16, 12},
{18, 75, 77, 23, 20, 32, 3, 17, 26, 12, 20, 10, 7, 11, 8, 2, 8, 28, 3, 25, 22},
{18, 75, 102, 24, 20, 31, 9, 11, 19, 5, 14, 42, 33, 4, 9, 29, 26, 6, 1, 5, 20},
{18, 76, 100, 20, 19, 14, 23, 5, 9, 1, 19, 4, 21, 36, 3, 16, 24, 11, 5, 41, 35},
{18, 77, 95, 16, 15, 18, 28, 1, 14, 17, 11, 7, 4, 3, 31, 4, 25, 21, 41, 5, 36},
{18, 78, 107, 23, 20, 35, 8, 12, 18, 5, 13, 9, 3, 6, 32, 28, 18, 10, 8, 40, 38},
{18, 79, 95, 15, 14, 27, 23, 1, 13, 16, 4, 19, 4, 24, 16, 20, 1, 18, 17, 44, 35},
{18, 80, 108, 24, 20, 36, 4, 16, 28, 12, 13, 27, 11, 1, 14, 21, 7, 14, 4, 45, 35},
{18, 90, 93, 14, 15, 19, 42, 13, 1, 12, 4, 23, 25, 14, 51, 21, 4, 18, 20, 1, 19},
{18, 105, 91, 26, 33, 46, 15, 11, 4, 15, 14, 4, 11, 19, 1, 45, 15, 12, 14, 31, 29},
{19, 36, 68, 16, 20, 11, 5, 1, 7, 12, 6, 13, 6, 5, 1, 16, 7, 12, 8, 4, 20, 16},
{19, 44, 70, 14, 11, 19, 3, 8, 12, 5, 7, 14, 11, 19, 3, 8, 12, 5, 13, 25, 6, 19},
{19, 48, 65, 14, 12, 22, 2, 10, 16, 8, 24, 11, 13, 9, 2, 7, 8, 5, 19, 15, 1, 14},
{19, 53, 45, 14, 8, 10, 21, 6, 2, 4, 8, 15, 9, 5, 3, 24, 5, 9, 1, 4, 16, 13},
{19, 59, 77, 15, 18, 26, 8, 7, 4, 14, 1, 10, 9, 8, 18, 19, 12, 2, 10, 7, 33, 26},
{19, 62, 60, 15, 21, 26, 9, 6, 3, 8, 16, 7, 5, 11, 15, 2, 11, 9, 23, 4, 20, 19},
{19, 70, 64, 18, 20, 12, 20, 7, 5, 2, 3, 16, 2, 9, 14, 8, 23, 17, 30, 2, 21, 19},
{19, 72, 99, 23, 18, 31, 5, 13, 18, 10, 4, 40, 8, 2, 6, 32, 2, 10, 28, 26, 8, 18},
{19, 74, 62, 21, 11, 12, 30, 10, 1, 13, 18, 13, 8, 5, 3, 32, 1, 10, 5, 9, 23, 19},
{19, 77, 104, 21, 17, 14, 25, 3, 11, 4, 5, 11, 24, 1, 6, 36, 17, 25, 16, 9, 43, 34},
{19, 78, 94, 24, 13, 15, 26, 11, 2, 9, 8, 5, 3, 33, 11, 2, 27, 7, 18, 4, 41, 37},
{19, 81, 99, 23, 28, 30, 16, 7, 2, 17, 9, 9, 7, 23, 16, 25, 9, 8, 1, 46, 10, 35},
{19, 96, 78, 22, 30, 44, 14, 8, 6, 19, 13, 20, 12, 1, 11, 34, 7, 12, 23, 22, 5, 17},
{19, 98, 100, 31, 28, 39, 3, 25, 34, 14, 25, 8, 20, 11, 3, 5, 1, 2, 36, 35, 7, 27},
{20, 45, 33, 15, 7, 8, 15, 5, 2, 1, 7, 3, 3, 5, 18, 4, 18, 3, 2, 1, 5, 4, 9},
{18, 40, 61, 11, 10, 19, 1, 9, 12, 4, 14, 10, 16, 4, 6, 6, 10, 2, 8, 22, 18},
{18, 45, 42, 10, 8, 12, 15, 2, 6, 12, 2, 7, 3, 8, 4, 14, 11, 20, 1, 13, 12},
{18, 74, 71, 16, 20, 38, 12, 4, 8, 16, 20, 9, 7, 5, 33, 2, 10, 3, 8, 23, 18},
{18, 82, 65, 17, 28, 37, 10, 7, 3, 4, 13, 12, 20, 9, 28, 25, 2, 7, 17, 5, 12},
{18, 84, 94, 22, 18, 19, 25, 4, 14, 13, 6, 26, 31, 16, 11, 5, 6, 46, 1, 7, 38},
{18, 88, 95, 26, 35, 27, 17, 9, 8, 19, 8, 31, 13, 25, 2, 17, 15, 32, 2, 29, 27},
{19, 51, 58, 13, 6, 5, 9, 18, 1, 4, 7, 13, 20, 4, 14, 7, 10, 4, 3, 1, 26, 25},
{19, 68, 69, 17, 13, 12, 26, 1, 11, 4, 10, 21, 15, 6, 3, 23, 9, 31, 14, 3, 20, 17},
{19, 71, 72, 21, 19, 31, 2, 17, 23, 13, 18, 8, 9, 28, 3, 8, 5, 2, 7, 5, 23, 20},
{19, 72, 100, 17, 18, 37, 16, 1, 19, 12, 4, 8, 28, 24, 20, 4, 20, 35, 17, 1, 19, 18},
{20, 25, 29, 7, 6, 12, 1, 5, 5, 3, 2, 1, 5, 1, 7, 4, 9, 3, 6, 10, 1, 8, 7},
{20, 59, 85, 18, 22, 19, 14, 4, 3, 16, 10, 9, 10, 1, 8, 25, 7, 3, 19, 15, 3, 31, 28},
{20, 72, 101, 22, 18, 32, 4, 14, 26, 20, 26, 22, 4, 18, 6, 12, 20, 31, 13, 8, 5, 23, 18},
{21, 50, 70, 16, 18, 16, 14, 2, 2, 14, 9, 13, 3, 6, 17, 1, 13, 2, 12, 8, 6, 2, 27, 23},
{18, 105, 87, 21, 17, 27, 40, 4, 13, 25, 3, 24, 16, 11, 10, 19, 41, 1, 9, 36, 28},
{19, 80, 85, 26, 19, 35, 8, 11, 25, 1, 9, 6, 5, 16, 24, 15, 34, 14, 8, 6, 26, 20},
{18, 39, 56, 16, 23, 11, 5, 3, 2, 1, 5, 6, 13, 4, 10, 1, 9, 1, 7, 20, 19},
{18, 41, 52, 10, 14, 17, 6, 4, 2, 9, 7, 8, 4, 13, 2, 9, 1, 10, 9, 22, 19},
{18, 49, 62, 14, 18, 17, 10, 4, 1, 16, 8, 15, 7, 3, 1, 7, 4, 11, 9, 29, 20},
{18, 49, 66, 14, 16, 19, 12, 2, 15, 3, 22, 7, 5, 2, 11, 7, 9, 4, 3, 25, 24},
{18, 49, 68, 17, 14, 18, 3, 7, 4, 16, 4, 22, 11, 3, 8, 14, 2, 5, 7, 28, 21},
{18, 51, 64, 13, 20, 18, 6, 7, 2, 16, 5, 1, 4, 12, 14, 9, 1, 11, 10, 30, 21},
{18, 52, 100, 23, 29, 17, 6, 11, 24, 16, 12, 4, 7, 1, 6, 19, 20, 13, 4, 28, 24},

```

```

{18, 55, 73, 19, 15, 21, 4, 11, 23, 5, 16, 16, 4, 12, 1, 3, 31, 7, 2, 5, 24},
{18, 61, 77, 14, 9, 13, 25, 5, 4, 17, 19, 5, 20, 7, 15, 15, 4, 11, 3, 32, 29},
{18, 61, 91, 26, 35, 17, 9, 8, 5, 7, 24, 3, 2, 9, 19, 9, 1, 8, 10, 32, 29},
{18, 63, 95, 20, 16, 27, 5, 11, 19, 1, 6, 12, 32, 15, 16, 14, 1, 13, 4, 36, 27},
{18, 64, 87, 18, 16, 30, 2, 14, 20, 9, 12, 23, 19, 1, 7, 3, 4, 11, 11, 34, 30},
{18, 67, 98, 29, 38, 18, 11, 6, 7, 25, 7, 4, 9, 1, 8, 19, 6, 13, 10, 35, 32},
{18, 72, 100, 21, 19, 32, 2, 17, 23, 4, 28, 8, 13, 24, 7, 2, 11, 9, 8, 40, 32},
{18, 72, 103, 31, 41, 17, 14, 5, 11, 25, 3, 10, 1, 6, 20, 3, 14, 13, 2, 37, 35},
{18, 74, 65, 19, 14, 12, 29, 2, 10, 5, 11, 24, 3, 7, 14, 36, 4, 10, 22, 6, 16},
{18, 76, 55, 14, 10, 11, 17, 24, 4, 6, 5, 6, 18, 11, 16, 7, 31, 5, 6, 23, 22},
{18, 80, 111, 22, 19, 39, 3, 16, 25, 12, 4, 15, 28, 28, 9, 2, 13, 11, 8, 44, 36},
{18, 81, 103, 24, 28, 29, 20, 4, 14, 17, 1, 30, 2, 9, 3, 22, 6, 14, 15, 44, 37},
{18, 82, 58, 26, 15, 14, 27, 5, 9, 11, 4, 9, 5, 4, 32, 5, 31, 3, 11, 8, 19},
{18, 82, 104, 20, 28, 34, 12, 8, 4, 19, 13, 16, 7, 27, 20, 1, 18, 17, 4, 43, 39},
{18, 82, 105, 27, 26, 29, 6, 17, 3, 22, 5, 32, 11, 10, 18, 18, 4, 14, 6, 44, 38},
{18, 85, 113, 20, 28, 37, 12, 8, 6, 14, 16, 10, 2, 8, 7, 30, 32, 23, 7, 46, 39},
{18, 87, 95, 25, 28, 34, 22, 3, 19, 12, 12, 22, 7, 5, 4, 1, 3, 10, 48, 7, 39},
{18, 88, 89, 21, 15, 19, 33, 6, 9, 5, 14, 19, 8, 5, 9, 13, 56, 17, 2, 15, 32},
{18, 89, 104, 16, 14, 26, 33, 2, 12, 18, 8, 16, 14, 7, 26, 26, 2, 19, 18, 45, 44},
{18, 89, 104, 29, 27, 33, 14, 13, 17, 12, 7, 26, 1, 19, 8, 19, 14, 3, 11, 45, 44},
{18, 94, 81, 28, 24, 42, 10, 14, 22, 6, 16, 10, 4, 7, 39, 9, 1, 8, 31, 7, 24},
{18, 97, 80, 23, 18, 22, 34, 5, 13, 10, 12, 28, 12, 1, 11, 46, 8, 15, 29, 7, 22},
{18, 102, 91, 23, 30, 49, 16, 7, 11, 26, 14, 2, 13, 7, 42, 13, 1, 12, 2, 35, 25},
{18, 109, 81, 26, 42, 41, 14, 12, 5, 7, 11, 3, 1, 40, 4, 39, 8, 6, 1, 5, 30},
{19, 29, 40, 10, 7, 12, 3, 4, 7, 5, 1, 4, 1, 13, 2, 7, 9, 4, 3, 1, 15, 14},
{19, 33, 32, 10, 12, 11, 8, 2, 1, 10, 6, 4, 5, 3, 1, 2, 4, 14, 5, 3, 11, 8},
{19, 35, 40, 7, 5, 12, 11, 2, 3, 8, 1, 4, 1, 10, 3, 5, 9, 9, 2, 7, 19, 16},
{19, 40, 61, 13, 10, 17, 3, 7, 12, 4, 7, 21, 1, 6, 8, 5, 3, 8, 11, 6, 23, 17},
{19, 55, 81, 23, 32, 11, 12, 7, 8, 17, 10, 1, 9, 4, 10, 1, 9, 14, 5, 9, 32, 23},
{19, 58, 90, 25, 33, 12, 13, 9, 24, 11, 1, 10, 4, 6, 7, 17, 9, 1, 8, 8, 33, 25},
{19, 61, 51, 16, 14, 31, 2, 12, 18, 7, 5, 7, 9, 20, 2, 5, 17, 1, 3, 13, 2, 11},
{19, 63, 85, 30, 33, 12, 11, 7, 4, 10, 19, 4, 7, 1, 14, 13, 1, 9, 8, 3, 33, 30},
{19, 64, 74, 21, 15, 28, 6, 9, 27, 5, 4, 1, 7, 24, 6, 13, 26, 10, 4, 6, 22, 16},
{19, 67, 120, 30, 37, 23, 7, 21, 23, 16, 7, 2, 17, 2, 9, 25, 19, 6, 13, 10, 35, 32},
{19, 68, 67, 16, 17, 35, 15, 1, 18, 10, 5, 1, 7, 13, 32, 6, 9, 1, 8, 6, 19, 17},
{19, 69, 104, 17, 10, 13, 29, 7, 3, 16, 24, 12, 33, 15, 21, 9, 6, 3, 15, 42, 12, 27},
{19, 71, 108, 30, 41, 21, 9, 4, 5, 3, 10, 28, 3, 1, 2, 7, 5, 25, 18, 7, 39, 32},
{19, 72, 95, 21, 20, 31, 1, 19, 22, 8, 23, 4, 8, 15, 21, 5, 1, 7, 6, 10, 41, 31},
{19, 78, 100, 15, 11, 18, 34, 4, 7, 19, 25, 12, 7, 9, 25, 5, 2, 20, 16, 17, 41, 37},
{19, 78, 100, 24, 20, 34, 4, 16, 18, 10, 8, 2, 9, 25, 11, 7, 21, 5, 16, 16, 41, 37},
{19, 79, 96, 19, 32, 28, 11, 8, 3, 5, 4, 24, 12, 2, 10, 13, 20, 19, 3, 16, 44, 35},
{19, 79, 104, 14, 13, 25, 27, 1, 12, 15, 4, 31, 2, 29, 19, 11, 8, 3, 17, 48, 14, 31},
{19, 81, 110, 39, 42, 16, 17, 6, 3, 12, 27, 9, 6, 15, 15, 1, 14, 4, 10, 1, 41, 40},
{19, 82, 69, 21, 20, 41, 1, 19, 22, 4, 13, 2, 15, 28, 26, 9, 4, 6, 13, 8, 1, 7},
{19, 82, 100, 24, 25, 33, 15, 9, 9, 16, 6, 3, 8, 25, 2, 7, 5, 21, 19, 17, 42, 40},
{19, 86, 64, 22, 17, 19, 28, 7, 10, 10, 9, 16, 6, 4, 3, 13, 10, 1, 36, 11, 26, 24},
{20, 23, 28, 5, 4, 5, 9, 3, 1, 3, 2, 6, 1, 4, 4, 2, 7, 1, 6, 5, 5, 12, 11},
{20, 45, 62, 12, 13, 20, 9, 3, 2, 11, 5, 1, 4, 4, 16, 10, 7, 12, 12, 5, 7, 26, 19},
{20, 49, 64, 16, 11, 22, 5, 6, 12, 8, 1, 7, 6, 16, 4, 7, 4, 13, 3, 10, 10, 26, 23},
{20, 53, 73, 13, 17, 23, 9, 4, 6, 9, 6, 8, 1, 7, 8, 21, 4, 5, 19, 13, 5, 29, 24},

```



```

{20, 67, 61, 16, 23, 28, 7, 4, 5, 3, 1, 4, 2, 8, 2, 20, 5, 6, 33, 14, 2, 18, 16},
{20, 73, 103, 34, 39, 17, 12, 5, 8, 11, 25, 4, 7, 1, 6, 3, 1, 3, 14, 18, 16, 39, 34},
{20, 75, 109, 19, 22, 34, 16, 3, 12, 13, 1, 11, 1, 33, 17, 14, 7, 4, 18, 24, 9, 42, 33},
{20, 78, 76, 19, 12, 17, 30, 7, 5, 9, 13, 14, 12, 5, 4, 1, 46, 5, 13, 11, 3, 8, 32},
{21, 28, 40, 13, 15, 6, 4, 3, 1, 4, 10, 1, 3, 2, 3, 8, 1, 6, 4, 3, 1, 2, 15, 13},
{21, 30, 29, 9, 11, 10, 5, 4, 1, 9, 2, 3, 7, 1, 4, 1, 6, 4, 3, 1, 11, 1, 10, 9},
{21, 31, 31, 11, 8, 12, 3, 5, 9, 5, 1, 3, 8, 4, 2, 5, 4, 1, 5, 11, 2, 2, 11, 9},
{21, 44, 60, 13, 11, 20, 2, 9, 15, 6, 8, 15, 4, 2, 13, 2, 3, 7, 5, 1, 4, 6, 25, 19},
{21, 57, 68, 12, 13, 12, 20, 11, 1, 1, 11, 15, 3, 17, 7, 4, 14, 3, 1, 2, 14, 12, 31, 26},
{21, 69, 77, 15, 22, 32, 8, 7, 1, 11, 7, 10, 9, 4, 3, 8, 1, 45, 7, 9, 13, 2, 11, 24},
{21, 80, 68, 24, 23, 33, 5, 10, 8, 20, 4, 9, 6, 2, 6, 4, 35, 7, 2, 10, 8, 24, 3, 21},
{21, 81, 114, 36, 45, 16, 9, 11, 7, 2, 2, 16, 27, 15, 23, 1, 4, 11, 13, 3, 7, 3, 42, 39},
{18, 39, 47, 7, 5, 13, 14, 2, 3, 8, 1, 4, 3, 1, 13, 1, 15, 11, 21, 3, 18},
{18, 39, 86, 19, 20, 11, 7, 1, 6, 15, 4, 9, 15, 10, 14, 21, 4, 18, 20, 1, 19},
{18, 40, 74, 18, 22, 14, 4, 10, 16, 10, 9, 5, 4, 1, 17, 1, 12, 11, 21, 2, 19},
{18, 43, 77, 20, 23, 12, 5, 3, 2, 5, 6, 13, 7, 4, 1, 7, 23, 20, 22, 1, 21},
{18, 46, 68, 12, 15, 19, 9, 3, 6, 8, 4, 23, 13, 2, 10, 1, 9, 14, 6, 26, 20},
{18, 47, 66, 17, 12, 18, 5, 7, 22, 1, 9, 8, 8, 1, 7, 12, 6, 13, 27, 7, 20},
{18, 48, 80, 16, 12, 20, 4, 8, 13, 7, 4, 24, 6, 1, 5, 24, 9, 15, 27, 6, 21},
{18, 51, 78, 11, 14, 26, 8, 3, 5, 12, 13, 6, 17, 15, 19, 2, 13, 8, 11, 27, 24},
{18, 51, 88, 24, 27, 20, 4, 1, 6, 20, 5, 11, 18, 10, 3, 7, 16, 8, 9, 26, 25},
{18, 52, 64, 17, 12, 23, 5, 3, 4, 2, 1, 5, 20, 4, 9, 7, 16, 7, 9, 27, 25},
{18, 53, 47, 16, 12, 25, 4, 8, 14, 6, 3, 5, 5, 1, 4, 8, 22, 3, 6, 17, 14},
{18, 56, 64, 13, 8, 12, 23, 5, 3, 2, 1, 13, 20, 7, 16, 8, 5, 3, 9, 31, 25},
{18, 58, 74, 16, 18, 24, 14, 2, 13, 7, 1, 23, 8, 13, 1, 12, 2, 10, 31, 4, 27},
{18, 61, 104, 25, 36, 14, 11, 3, 19, 25, 17, 5, 14, 13, 4, 9, 8, 17, 35, 9, 26},
{18, 64, 82, 18, 20, 26, 16, 2, 15, 7, 1, 25, 8, 15, 1, 14, 10, 4, 6, 33, 31},
{18, 67, 83, 18, 10, 12, 27, 8, 2, 6, 8, 30, 2, 10, 3, 24, 13, 5, 8, 35, 32},
{18, 72, 83, 13, 8, 9, 19, 23, 7, 1, 10, 11, 2, 9, 25, 4, 27, 20, 39, 6, 33},
{18, 74, 75, 17, 18, 15, 24, 7, 8, 16, 1, 15, 4, 11, 7, 1, 6, 19, 13, 42, 32},
{18, 74, 101, 21, 22, 31, 20, 1, 15, 8, 7, 1, 32, 4, 18, 24, 10, 8, 2, 38, 36},
{18, 76, 70, 21, 18, 37, 3, 15, 24, 7, 8, 4, 33, 5, 2, 1, 11, 3, 25, 7, 18},
{18, 77, 95, 27, 18, 32, 10, 8, 2, 6, 26, 1, 13, 10, 28, 12, 1, 11, 42, 7, 35},
{18, 84, 88, 20, 17, 23, 24, 3, 14, 23, 10, 12, 1, 25, 12, 2, 10, 2, 14, 45, 39},
{18, 85, 64, 26, 14, 11, 34, 3, 8, 12, 5, 13, 38, 7, 6, 4, 30, 1, 9, 8, 17},
{18, 86, 106, 16, 17, 21, 32, 15, 1, 14, 4, 16, 9, 7, 2, 29, 34, 23, 46, 6, 40},
{18, 90, 67, 31, 25, 34, 6, 4, 5, 10, 3, 1, 6, 36, 1, 4, 1, 33, 11, 10, 21},
{18, 90, 76, 22, 39, 29, 13, 9, 10, 19, 4, 5, 16, 1, 6, 3, 37, 9, 9, 28, 25},
{18, 91, 75, 18, 28, 22, 23, 11, 7, 21, 1, 24, 4, 3, 16, 15, 15, 32, 4, 31, 28},
{18, 97, 94, 23, 20, 54, 3, 17, 16, 10, 6, 4, 2, 19, 24, 14, 40, 7, 12, 31, 26},
{18, 102, 72, 18, 32, 21, 31, 10, 8, 11, 10, 2, 6, 12, 41, 9, 40, 11, 1, 10, 21},
{18, 104, 80, 28, 24, 19, 33, 5, 14, 12, 17, 20, 8, 47, 12, 8, 3, 14, 11, 32, 25},
{19, 30, 51, 9, 5, 6, 10, 4, 1, 3, 4, 15, 1, 15, 11, 4, 3, 12, 7, 16, 2, 14},
{19, 44, 48, 11, 9, 8, 16, 1, 7, 2, 8, 13, 2, 5, 4, 12, 7, 3, 4, 8, 24, 20},
{19, 44, 60, 16, 11, 17, 5, 6, 20, 1, 7, 6, 11, 1, 5, 8, 4, 12, 4, 8, 24, 20},
{19, 44, 60, 16, 12, 16, 4, 8, 20, 5, 11, 7, 1, 6, 5, 6, 13, 4, 1, 7, 24, 20},
{19, 49, 64, 15, 13, 21, 4, 9, 10, 3, 2, 1, 5, 4, 1, 20, 3, 16, 13, 26, 3, 23},
{19, 49, 83, 17, 15, 17, 2, 9, 4, 19, 2, 15, 6, 8, 1, 7, 4, 26, 23, 1, 25, 24},
{19, 52, 56, 11, 6, 7, 11, 17, 5, 1, 8, 16, 4, 7, 12, 1, 16, 8, 1, 7, 29, 23},
{19, 52, 92, 21, 31, 11, 10, 1, 13, 10, 17, 12, 3, 7, 20, 8, 4, 20, 12, 28, 4, 24},

```

```

{19, 55, 35, 17, 7, 5, 8, 18, 2, 3, 9, 11, 1, 8, 18, 1, 17, 5, 7, 11, 2, 9},
{19, 57, 63, 16, 9, 12, 20, 6, 3, 8, 7, 1, 5, 17, 6, 1, 13, 5, 16, 11, 30, 27},
{19, 57, 67, 18, 17, 22, 1, 9, 7, 19, 4, 18, 2, 3, 2, 11, 1, 5, 4, 9, 30, 27},
{19, 60, 85, 25, 35, 14, 11, 5, 4, 7, 19, 3, 8, 17, 1, 3, 4, 2, 12, 12, 31, 29},
{19, 62, 110, 25, 37, 13, 12, 1, 15, 12, 21, 14, 3, 9, 26, 6, 14, 22, 6, 8, 32, 30},
{19, 77, 91, 24, 7, 8, 12, 26, 6, 1, 5, 4, 16, 11, 31, 4, 2, 24, 22, 5, 41, 36},
{19, 78, 92, 23, 20, 35, 3, 17, 26, 4, 9, 22, 12, 3, 2, 1, 5, 4, 5, 13, 43, 35},
{19, 80, 68, 20, 28, 32, 13, 7, 6, 1, 9, 16, 4, 36, 15, 4, 6, 7, 5, 1, 24, 20},
{19, 92, 62, 26, 16, 17, 33, 10, 6, 5, 12, 11, 36, 4, 8, 15, 4, 29, 12, 14, 1, 13},
{19, 94, 100, 32, 23, 39, 9, 14, 36, 5, 17, 2, 14, 27, 1, 13, 18, 6, 34, 32, 4, 28},
{19, 103, 89, 29, 25, 49, 4, 10, 11, 27, 6, 15, 1, 12, 11, 1, 10, 40, 6, 9, 33, 30},
{19, 105, 93, 16, 15, 24, 50, 1, 5, 9, 13, 4, 9, 33, 22, 7, 43, 16, 6, 10, 36, 26},
{20, 25, 36, 8, 7, 10, 1, 6, 9, 3, 7, 4, 5, 8, 5, 2, 5, 4, 1, 3, 3, 14, 11},
{20, 34, 39, 9, 7, 5, 13, 2, 3, 2, 6, 1, 4, 11, 1, 3, 7, 2, 11, 5, 19, 4, 15},
{20, 41, 68, 14, 13, 14, 1, 5, 3, 4, 15, 3, 11, 2, 1, 8, 7, 4, 22, 19, 1, 21, 20},
{20, 44, 72, 20, 24, 11, 5, 4, 1, 7, 8, 12, 6, 17, 6, 1, 5, 4, 16, 11, 24, 4, 20},
{20, 53, 49, 13, 15, 25, 9, 4, 2, 3, 10, 5, 1, 4, 13, 5, 2, 9, 24, 7, 1, 15, 14},
{20, 71, 66, 20, 13, 38, 5, 8, 2, 3, 21, 1, 12, 5, 7, 3, 2, 10, 28, 1, 8, 25, 18},
{20, 76, 80, 20, 17, 19, 20, 3, 12, 2, 8, 12, 1, 23, 21, 2, 6, 14, 2, 10, 8, 39, 37},
{20, 76, 80, 20, 17, 19, 20, 3, 14, 8, 10, 1, 23, 21, 6, 2, 12, 12, 2, 8, 2, 39, 37},
{21, 29, 50, 12, 17, 7, 5, 2, 9, 11, 9, 4, 5, 7, 2, 3, 8, 5, 1, 4, 5, 15, 1, 14},
{21, 58, 54, 16, 13, 29, 3, 10, 11, 8, 4, 6, 5, 3, 9, 2, 7, 7, 10, 25, 2, 5, 18, 15},
{18, 64, 67, 20, 17, 27, 7, 10, 12, 8, 4, 3, 40, 4, 8, 11, 5, 1, 7, 6, 24},
{20, 29, 30, 9, 7, 13, 2, 5, 11, 4, 1, 3, 4, 7, 5, 2, 1, 3, 3, 10, 1, 10, 9},
{18, 51, 65, 17, 13, 21, 5, 8, 16, 1, 6, 3, 12, 14, 9, 32, 5, 3, 11, 8, 19},
{18, 31, 48, 5, 4, 7, 15, 1, 3, 6, 4, 6, 8, 2, 6, 2, 17, 14, 1, 16, 15},
{18, 33, 50, 14, 19, 9, 5, 10, 14, 5, 4, 1, 3, 6, 1, 5, 4, 4, 1, 17, 16},
{18, 50, 78, 21, 29, 11, 10, 8, 21, 4, 6, 8, 3, 5, 2, 3, 13, 16, 6, 28, 22},
{18, 57, 62, 15, 16, 26, 8, 7, 6, 10, 1, 3, 9, 7, 2, 5, 36, 11, 1, 10, 21},
{18, 72, 79, 15, 23, 34, 7, 8, 5, 2, 1, 4, 15, 11, 3, 12, 45, 1, 14, 13, 27},
{18, 73, 79, 16, 23, 34, 9, 7, 2, 9, 8, 11, 11, 1, 7, 4, 6, 45, 15, 13, 28},
{18, 73, 80, 21, 24, 28, 18, 3, 15, 7, 5, 8, 20, 2, 3, 8, 1, 4, 12, 41, 32},
{18, 75, 85, 17, 21, 37, 13, 4, 9, 16, 10, 12, 5, 48, 7, 3, 1, 16, 4, 11, 27},
{18, 76, 58, 15, 8, 9, 10, 11, 23, 7, 1, 10, 9, 1, 12, 22, 19, 35, 21, 1, 20},
{18, 78, 85, 22, 17, 39, 5, 12, 18, 9, 2, 10, 11, 3, 46, 13, 5, 3, 11, 8, 32},
{18, 80, 92, 19, 17, 44, 2, 15, 21, 8, 7, 2, 5, 20, 8, 1, 3, 4, 48, 12, 32},
{18, 81, 80, 25, 22, 34, 10, 12, 20, 5, 3, 2, 1, 5, 6, 4, 46, 8, 1, 7, 35},
{18, 82, 84, 22, 24, 36, 15, 7, 5, 7, 12, 10, 2, 9, 48, 13, 2, 11, 1, 10, 34},
{18, 83, 69, 24, 25, 34, 17, 6, 1, 5, 13, 8, 11, 7, 1, 35, 11, 2, 9, 28, 20},
{18, 84, 92, 24, 19, 41, 5, 14, 16, 13, 6, 8, 3, 8, 2, 6, 2, 19, 51, 14, 33},
{18, 87, 90, 27, 20, 40, 7, 13, 26, 8, 2, 4, 7, 7, 3, 1, 3, 4, 50, 11, 37},
{18, 91, 93, 23, 27, 41, 16, 7, 3, 10, 14, 10, 3, 7, 15, 1, 14, 3, 52, 10, 39},
{18, 100, 69, 19, 12, 14, 24, 31, 10, 2, 16, 16, 3, 13, 17, 7, 5, 11, 38, 34, 28},
{18, 102, 75, 23, 24, 19, 36, 5, 14, 20, 3, 2, 7, 20, 5, 12, 11, 3, 39, 32, 31},
{18, 109, 75, 19, 15, 18, 24, 33, 12, 3, 21, 11, 8, 15, 9, 3, 17, 14, 42, 36, 31},
{18, 110, 80, 26, 20, 28, 36, 9, 11, 23, 3, 3, 17, 8, 12, 14, 44, 8, 4, 35, 31},
{19, 42, 60, 19, 23, 10, 5, 4, 1, 3, 8, 15, 4, 2, 5, 1, 3, 11, 9, 7, 22, 20},
{19, 46, 48, 16, 9, 21, 5, 4, 1, 3, 4, 2, 13, 3, 5, 1, 3, 4, 2, 27, 6, 19},
{19, 55, 64, 19, 16, 20, 3, 5, 8, 18, 4, 4, 16, 2, 3, 5, 1, 4, 12, 9, 28, 27},
{19, 57, 95, 22, 35, 13, 9, 4, 5, 17, 2, 5, 28, 4, 1, 3, 12, 18, 11, 7, 32, 25},

```

```

{19, 60, 67, 13, 18, 29, 8, 5, 3, 9, 11, 11, 5, 4, 2, 38, 1, 5, 13, 4, 9, 22},
{19, 61, 63, 19, 14, 28, 6, 8, 18, 1, 5, 2, 4, 6, 4, 1, 3, 2, 1, 35, 8, 26},
{19, 63, 57, 16, 12, 13, 22, 7, 5, 4, 9, 13, 3, 4, 5, 10, 3, 1, 2, 35, 5, 28},
{19, 65, 68, 17, 19, 29, 6, 5, 6, 9, 10, 1, 3, 1, 7, 2, 5, 5, 14, 39, 12, 26},
{19, 65, 103, 25, 40, 13, 12, 1, 8, 3, 14, 5, 11, 27, 7, 6, 1, 16, 22, 7, 36, 29},
{19, 71, 79, 15, 10, 11, 35, 5, 4, 1, 3, 9, 1, 6, 21, 15, 6, 44, 16, 5, 11, 27},
{19, 73, 52, 24, 11, 13, 25, 6, 5, 3, 10, 1, 7, 7, 4, 11, 2, 28, 3, 27, 7, 18},
{19, 73, 78, 19, 20, 34, 12, 5, 2, 1, 5, 14, 3, 7, 1, 6, 18, 7, 4, 44, 11, 29},
{19, 73, 113, 33, 40, 26, 7, 13, 34, 6, 7, 20, 11, 1, 8, 2, 6, 9, 4, 5, 39, 34},
{19, 75, 113, 28, 18, 29, 7, 11, 3, 4, 31, 44, 19, 12, 7, 3, 2, 1, 5, 40, 4, 35},
{19, 77, 104, 25, 14, 9, 29, 5, 4, 1, 3, 11, 7, 2, 5, 4, 8, 40, 37, 39, 1, 38},
{19, 79, 75, 10, 12, 20, 37, 8, 2, 6, 8, 14, 12, 16, 22, 4, 19, 1, 38, 21, 1, 20},
{19, 79, 113, 34, 45, 23, 11, 13, 15, 28, 17, 6, 5, 6, 2, 4, 13, 11, 10, 1, 40, 39},
{19, 79, 115, 36, 43, 20, 16, 13, 30, 12, 4, 12, 8, 17, 6, 14, 10, 2, 8, 5, 42, 37},
{19, 81, 60, 16, 7, 10, 21, 27, 4, 3, 1, 12, 5, 21, 1, 14, 6, 13, 33, 2, 25, 23},
{19, 84, 78, 17, 11, 10, 14, 32, 6, 4, 6, 5, 18, 11, 23, 6, 5, 1, 8, 46, 7, 38},
{19, 85, 98, 21, 18, 46, 3, 15, 24, 8, 7, 1, 6, 4, 5, 20, 7, 1, 6, 52, 13, 33},
{19, 91, 101, 22, 20, 49, 2, 18, 24, 7, 11, 3, 4, 16, 6, 2, 4, 1, 13, 52, 10, 39},
{19, 93, 104, 17, 28, 48, 10, 7, 3, 4, 12, 1, 13, 20, 10, 2, 8, 7, 19, 56, 18, 37},
{19, 94, 102, 24, 25, 45, 17, 5, 2, 1, 4, 20, 3, 12, 24, 5, 1, 7, 57, 6, 13, 37},
{20, 42, 46, 7, 6, 7, 22, 1, 4, 1, 8, 3, 5, 5, 2, 7, 13, 4, 3, 1, 24, 5, 18},
{20, 49, 72, 20, 29, 11, 9, 2, 7, 11, 18, 8, 5, 3, 5, 4, 9, 2, 8, 7, 7, 25, 24},
{20, 51, 41, 14, 8, 9, 20, 7, 1, 10, 10, 4, 3, 4, 6, 1, 5, 9, 1, 21, 17, 4, 13},
{20, 57, 85, 27, 30, 12, 5, 3, 4, 3, 2, 1, 1, 7, 25, 6, 7, 13, 19, 8, 5, 30, 27},
{20, 57, 90, 15, 17, 25, 13, 2, 11, 8, 33, 24, 13, 6, 5, 1, 3, 1, 7, 2, 32, 5, 25},
{20, 65, 109, 27, 38, 11, 16, 6, 5, 5, 33, 1, 8, 17, 7, 15, 6, 11, 16, 5, 11, 38, 27},
{20, 68, 73, 21, 17, 30, 4, 13, 14, 6, 5, 1, 4, 4, 3, 1, 6, 43, 5, 13, 1, 12, 25},
{20, 74, 79, 19, 10, 11, 34, 9, 1, 12, 15, 9, 4, 5, 11, 5, 9, 1, 4, 16, 45, 13, 29},
{20, 80, 57, 25, 7, 8, 12, 28, 6, 1, 5, 4, 1, 15, 12, 32, 5, 3, 11, 1, 29, 8, 19},
{21, 72, 58, 22, 19, 31, 3, 16, 14, 5, 6, 4, 1, 3, 4, 5, 2, 4, 27, 1, 3, 3, 23, 22},
{18, 46, 95, 19, 27, 11, 8, 5, 12, 18, 9, 2, 7, 22, 6, 24, 14, 8, 6, 26, 20},
{18, 47, 66, 21, 26, 10, 6, 5, 3, 11, 17, 4, 2, 5, 11, 3, 8, 5, 6, 24, 23},
{18, 48, 71, 21, 27, 12, 5, 4, 1, 3, 6, 1, 5, 21, 4, 1, 14, 13, 25, 2, 23},
{18, 52, 99, 21, 31, 12, 9, 3, 5, 1, 4, 28, 13, 2, 11, 24, 11, 17, 29, 6, 23},
{18, 53, 56, 13, 9, 16, 15, 4, 5, 17, 3, 2, 1, 14, 1, 5, 13, 4, 9, 27, 26},
{18, 69, 59, 20, 22, 27, 18, 2, 8, 11, 5, 32, 5, 3, 4, 10, 3, 2, 6, 21, 16},
{18, 69, 92, 34, 35, 23, 11, 7, 5, 23, 2, 3, 3, 5, 1, 4, 12, 2, 11, 35, 34},
{18, 73, 95, 34, 39, 23, 11, 6, 12, 21, 12, 5, 4, 1, 4, 9, 3, 1, 5, 38, 35},
{18, 76, 115, 33, 43, 20, 13, 8, 35, 7, 6, 1, 7, 1, 6, 23, 5, 18, 39, 2, 37},
{18, 79, 114, 34, 45, 20, 14, 13, 32, 5, 9, 1, 4, 18, 3, 15, 1, 14, 42, 5, 37},
{18, 84, 62, 25, 13, 14, 32, 12, 1, 15, 37, 7, 5, 3, 5, 30, 2, 3, 9, 8, 17},
{18, 86, 89, 25, 21, 40, 4, 6, 11, 27, 2, 8, 3, 8, 7, 4, 3, 1, 49, 10, 37},
{18, 89, 104, 29, 27, 33, 2, 12, 13, 31, 7, 26, 8, 3, 1, 2, 19, 5, 13, 45, 44},
{18, 90, 82, 18, 27, 45, 11, 7, 5, 2, 3, 26, 10, 1, 9, 19, 8, 37, 5, 29, 24},
{18, 96, 80, 29, 23, 44, 10, 13, 19, 10, 7, 3, 16, 9, 1, 8, 8, 36, 32, 4, 28},
{19, 69, 83, 24, 21, 24, 3, 13, 5, 27, 2, 22, 7, 2, 5, 12, 1, 3, 8, 5, 37, 32},
{19, 70, 54, 10, 15, 16, 29, 6, 4, 3, 1, 15, 1, 5, 1, 17, 4, 9, 4, 25, 24, 21},
{19, 72, 61, 21, 23, 28, 19, 2, 12, 8, 5, 33, 3, 5, 1, 2, 5, 8, 7, 21, 3, 18},
{19, 84, 78, 24, 11, 9, 40, 2, 7, 8, 5, 3, 9, 5, 6, 29, 15, 17, 38, 25, 4, 21},
{20, 34, 64, 15, 19, 11, 4, 7, 5, 4, 7, 1, 3, 2, 4, 20, 2, 8, 6, 14, 18, 2, 16},

```

```

{20, 39, 47, 13, 11, 15, 2, 5, 4, 15, 2, 5, 12, 4, 1, 3, 5, 7, 3, 2, 1, 20, 19},
{20, 51, 88, 13, 15, 23, 11, 2, 9, 8, 1, 6, 24, 16, 5, 11, 20, 7, 13, 18, 28, 5, 23},
{20, 68, 58, 18, 19, 31, 9, 5, 4, 3, 16, 2, 5, 4, 1, 3, 13, 8, 4, 27, 5, 23, 18},
{20, 99, 92, 21, 15, 16, 47, 6, 8, 1, 17, 25, 2, 10, 13, 14, 21, 17, 16, 45, 4, 29, 25},
{21, 28, 26, 5, 4, 5, 14, 3, 1, 3, 2, 6, 1, 4, 4, 1, 6, 3, 5, 5, 12, 9, 2, 7},
{21, 66, 55, 11, 6, 4, 5, 11, 29, 3, 1, 6, 5, 1, 4, 16, 21, 11, 5, 3, 26, 6, 23, 17},
{21, 84, 67, 23, 25, 36, 17, 6, 4, 5, 16, 5, 4, 1, 6, 1, 3, 6, 4, 5, 5, 31, 27, 26},
{18, 74, 107, 29, 45, 14, 8, 7, 3, 4, 6, 2, 4, 1, 5, 24, 22, 28, 40, 6, 34},
{20, 93, 83, 20, 12, 13, 48, 8, 4, 3, 10, 7, 28, 17, 8, 9, 35, 1, 1, 12, 35, 11, 23},
{18, 43, 46, 8, 7, 6, 22, 1, 5, 1, 3, 4, 7, 2, 5, 9, 12, 7, 2, 24, 19},
{18, 50, 46, 10, 6, 5, 11, 18, 1, 4, 4, 3, 7, 14, 4, 7, 1, 3, 8, 28, 22},
{18, 54, 55, 18, 12, 24, 4, 3, 5, 1, 2, 2, 3, 7, 14, 5, 1, 4, 9, 31, 23},
{18, 56, 66, 22, 34, 9, 7, 6, 1, 5, 2, 6, 11, 2, 3, 2, 32, 7, 1, 6, 24},
{18, 57, 56, 13, 8, 10, 26, 5, 3, 1, 9, 4, 16, 2, 6, 2, 7, 8, 3, 30, 27},
{18, 67, 72, 15, 18, 34, 12, 3, 5, 4, 12, 1, 3, 4, 2, 5, 16, 13, 4, 38, 29},
{18, 68, 45, 14, 11, 21, 22, 5, 6, 10, 4, 2, 3, 2, 4, 6, 5, 24, 1, 23, 21},
{18, 69, 73, 18, 17, 34, 5, 12, 9, 5, 4, 2, 7, 4, 1, 3, 16, 14, 5, 39, 30},
{18, 69, 81, 28, 41, 8, 7, 13, 3, 4, 6, 2, 4, 1, 5, 3, 11, 40, 10, 8, 29},
{18, 73, 80, 8, 10, 18, 37, 6, 2, 4, 8, 10, 7, 19, 9, 1, 8, 17, 13, 43, 30},
{18, 73, 119, 17, 16, 40, 1, 4, 11, 15, 3, 7, 5, 13, 20, 12, 41, 32, 3, 38, 35},
{18, 74, 68, 19, 16, 11, 28, 4, 7, 1, 3, 7, 10, 10, 15, 4, 11, 8, 2, 40, 34},
{18, 79, 94, 29, 50, 16, 13, 5, 8, 14, 2, 7, 5, 9, 44, 5, 2, 1, 4, 3, 35},
{18, 84, 92, 19, 21, 44, 17, 2, 12, 11, 3, 8, 3, 7, 2, 5, 20, 16, 4, 48, 36},
{18, 89, 93, 25, 18, 46, 6, 12, 1, 5, 26, 4, 1, 3, 10, 7, 11, 6, 5, 47, 42},
{18, 90, 94, 14, 11, 19, 46, 3, 8, 17, 12, 15, 21, 8, 5, 10, 13, 8, 2, 48, 42},
{18, 90, 109, 35, 55, 21, 14, 8, 6, 7, 54, 17, 4, 3, 5, 5, 2, 3, 11, 8, 36},
{18, 91, 93, 28, 17, 46, 7, 10, 4, 3, 13, 21, 11, 10, 1, 9, 5, 4, 1, 47, 44},
{18, 97, 92, 20, 14, 22, 41, 6, 8, 26, 13, 8, 9, 7, 1, 10, 11, 2, 9, 51, 46},
{18, 97, 98, 21, 12, 7, 9, 48, 5, 2, 11, 9, 8, 19, 30, 12, 7, 5, 2, 50, 47},
{18, 104, 93, 20, 25, 21, 38, 11, 9, 4, 17, 10, 19, 2, 7, 13, 1, 9, 8, 55, 49},
{18, 118, 81, 36, 27, 15, 40, 8, 7, 1, 6, 4, 5, 9, 22, 11, 45, 10, 1, 41, 32},
{19, 39, 40, 7, 5, 10, 17, 2, 3, 8, 1, 4, 3, 7, 3, 1, 4, 9, 2, 7, 23, 16},
{19, 43, 40, 7, 8, 11, 17, 5, 2, 1, 7, 3, 5, 6, 8, 5, 2, 1, 4, 3, 23, 20},
{19, 50, 51, 12, 5, 4, 5, 24, 3, 1, 3, 2, 6, 1, 4, 4, 10, 16, 7, 3, 27, 23},
{19, 56, 55, 11, 9, 12, 24, 2, 7, 8, 5, 4, 3, 5, 1, 2, 3, 14, 7, 11, 31, 25},
{19, 61, 55, 14, 12, 11, 24, 5, 6, 5, 7, 11, 3, 4, 1, 8, 7, 6, 1, 5, 31, 30},
{19, 67, 69, 16, 11, 8, 32, 3, 5, 5, 3, 4, 2, 7, 2, 1, 5, 23, 12, 7, 37, 30},
{19, 68, 66, 18, 11, 12, 27, 7, 4, 4, 8, 3, 1, 5, 19, 9, 1, 7, 6, 10, 39, 29},
{19, 72, 73, 17, 21, 34, 10, 7, 7, 6, 8, 3, 4, 13, 1, 5, 12, 3, 5, 8, 39, 33},
{19, 75, 93, 25, 50, 13, 12, 4, 8, 10, 3, 7, 3, 5, 13, 5, 2, 3, 11, 43, 8, 32},
{19, 78, 76, 22, 11, 14, 31, 8, 3, 17, 3, 5, 21, 4, 2, 3, 5, 1, 4, 12, 45, 33},
{19, 82, 110, 39, 43, 31, 5, 3, 2, 1, 8, 11, 25, 7, 12, 3, 14, 7, 5, 2, 42, 40},
{19, 85, 80, 9, 5, 6, 13, 19, 33, 4, 1, 7, 13, 9, 11, 5, 14, 20, 2, 18, 47, 38},
{19, 85, 104, 28, 57, 11, 7, 10, 4, 3, 13, 15, 6, 7, 12, 3, 9, 1, 9, 47, 8, 38},
{19, 86, 92, 21, 23, 42, 16, 5, 3, 9, 11, 8, 7, 2, 3, 5, 5, 8, 19, 17, 50, 36},
{19, 91, 93, 28, 18, 45, 7, 11, 3, 4, 22, 9, 8, 7, 1, 6, 13, 5, 8, 3, 48, 43},
{19, 95, 89, 21, 11, 25, 38, 6, 5, 1, 4, 4, 3, 2, 5, 24, 1, 3, 20, 13, 51, 44},
{20, 31, 30, 7, 4, 3, 4, 13, 2, 1, 3, 1, 5, 3, 9, 1, 3, 1, 2, 4, 5, 17, 14},
{20, 46, 41, 11, 7, 5, 7, 16, 3, 2, 6, 1, 9, 4, 9, 2, 1, 3, 7, 2, 5, 25, 21},
{20, 51, 45, 11, 8, 6, 7, 19, 5, 1, 3, 5, 5, 3, 1, 2, 9, 2, 9, 7, 7, 26, 25},

```

```

{20, 63, 58, 20, 22, 21, 18, 2, 5, 16, 14, 6, 4, 2, 7, 8, 3, 4, 2, 22, 1, 21, 20},
{20, 72, 47, 20, 7, 8, 16, 21, 5, 2, 1, 7, 3, 8, 6, 1, 12, 5, 27, 1, 7, 26, 19},
{20, 73, 77, 17, 20, 36, 11, 6, 3, 10, 7, 5, 4, 1, 3, 3, 4, 17, 15, 1, 5, 41, 32},
{20, 83, 85, 15, 28, 40, 7, 8, 6, 1, 4, 5, 1, 3, 7, 2, 19, 12, 5, 12, 7, 45, 38},
{21, 64, 59, 14, 9, 16, 25, 4, 5, 1, 3, 15, 2, 3, 5, 1, 6, 9, 4, 8, 1, 7, 34, 30},
{21, 65, 46, 22, 10, 11, 22, 7, 3, 2, 9, 5, 3, 4, 3, 2, 2, 1, 9, 2, 8, 24, 24, 17},
{21, 82, 89, 18, 21, 43, 13, 5, 2, 19, 7, 1, 6, 9, 5, 4, 7, 13, 3, 13, 3, 10, 46, 36},
{18, 57, 65, 12, 11, 34, 1, 10, 13, 4, 6, 14, 3, 1, 5, 4, 7, 2, 5, 31, 26},
{18, 58, 61, 15, 12, 31, 3, 9, 18, 4, 5, 3, 1, 2, 4, 5, 3, 1, 2, 30, 28},
{18, 68, 86, 22, 46, 9, 13, 5, 4, 1, 7, 4, 5, 6, 3, 1, 6, 16, 12, 40, 28},
{18, 76, 97, 24, 52, 14, 10, 4, 6, 11, 5, 2, 3, 5, 6, 2, 7, 17, 14, 45, 31},
{18, 80, 91, 19, 14, 47, 5, 9, 20, 4, 13, 7, 6, 16, 4, 1, 5, 12, 8, 44, 36},
{18, 85, 66, 30, 21, 34, 9, 12, 36, 3, 7, 5, 3, 2, 32, 5, 2, 3, 9, 8, 17},
{18, 87, 65, 29, 12, 10, 36, 3, 7, 11, 1, 4, 11, 6, 5, 1, 15, 36, 7, 29, 22},
{18, 103, 75, 33, 13, 16, 41, 6, 7, 4, 12, 5, 1, 4, 8, 9, 20, 42, 7, 34, 27},
{19, 88, 65, 29, 12, 13, 34, 11, 1, 14, 6, 5, 1, 6, 7, 1, 5, 36, 11, 10, 31, 21},
{19, 93, 65, 27, 16, 15, 35, 6, 9, 11, 5, 8, 3, 5, 7, 38, 11, 2, 9, 5, 30, 25},
{20, 110, 78, 30, 17, 20, 43, 13, 4, 1, 7, 12, 5, 4, 1, 3, 5, 48, 2, 19, 8, 35, 27},
{18, 96, 80, 31, 13, 9, 10, 33, 4, 3, 2, 1, 9, 3, 1, 2, 18, 5, 14, 49, 47},
{18, 98, 82, 30, 17, 15, 36, 6, 4, 5, 13, 4, 3, 1, 6, 9, 1, 4, 10, 52, 46},
{19, 70, 59, 22, 10, 5, 3, 4, 26, 2, 1, 5, 3, 4, 2, 1, 10, 12, 3, 7, 37, 33},
{19, 73, 63, 26, 11, 9, 27, 2, 7, 7, 6, 1, 6, 1, 6, 8, 1, 5, 3, 4, 37, 36},
{19, 85, 74, 30, 12, 10, 33, 2, 8, 8, 6, 2, 5, 7, 10, 3, 2, 1, 8, 4, 44, 41},
{19, 90, 77, 29, 14, 12, 35, 2, 3, 7, 15, 1, 4, 6, 5, 1, 4, 4, 3, 7, 48, 42},
{19, 99, 84, 31, 17, 13, 38, 5, 8, 14, 3, 2, 3, 4, 1, 3, 9, 7, 1, 8, 53, 46},
{19, 104, 88, 35, 13, 8, 11, 37, 5, 3, 14, 10, 8, 2, 6, 12, 2, 12, 8, 53, 2, 51},
{20, 107, 90, 34, 18, 16, 39, 4, 5, 7, 16, 2, 5, 1, 4, 2, 9, 9, 2, 7, 56, 5, 51},
{19, 80, 90, 22, 20, 38, 2, 18, 24, 15, 17, 24, 17, 7, 10, 12, 10, 7, 3, 28, 27, 25},
{21, 50, 54, 11, 8, 11, 20, 5, 3, 9, 2, 14, 7, 16, 5, 15, 9, 10, 2, 7, 6, 19, 18, 13},
{20, 65, 66, 16, 10, 14, 25, 6, 4, 2, 16, 24, 5, 20, 10, 11, 26, 8, 7, 4, 3, 21, 18},
{20, 88, 106, 25, 32, 31, 18, 7, 1, 30, 11, 29, 29, 11, 17, 12, 19, 34, 6, 5, 7, 28, 26},
{20, 36, 42, 10, 9, 17, 1, 8, 11, 5, 8, 12, 8, 3, 2, 3, 5, 7, 4, 13, 3, 13, 10},
{19, 43, 50, 12, 8, 7, 16, 1, 6, 4, 5, 16, 8, 3, 6, 13, 7, 1, 7, 22, 1, 21},
{19, 47, 49, 11, 8, 6, 10, 12, 2, 4, 3, 7, 5, 7, 2, 14, 14, 10, 2, 9, 24, 23},
{19, 48, 73, 13, 8, 11, 16, 5, 3, 9, 5, 18, 4, 17, 13, 16, 2, 14, 18, 26, 4, 22},
{19, 49, 64, 12, 9, 15, 13, 3, 6, 15, 2, 11, 14, 9, 5, 15, 13, 2, 11, 10, 25, 24},
{19, 55, 55, 11, 6, 7, 15, 16, 5, 1, 8, 16, 12, 6, 5, 4, 12, 1, 8, 7, 28, 27},
{19, 58, 74, 18, 11, 10, 19, 1, 9, 12, 13, 5, 4, 24, 8, 13, 16, 5, 11, 7, 31, 27},
{19, 68, 70, 17, 11, 16, 24, 6, 5, 13, 8, 23, 7, 25, 11, 2, 9, 30, 13, 4, 21, 17},
{19, 75, 94, 20, 22, 33, 18, 2, 13, 11, 12, 11, 21, 3, 10, 21, 1, 10, 14, 9, 40, 35},
{19, 75, 96, 18, 11, 15, 31, 7, 4, 3, 16, 28, 15, 32, 27, 16, 15, 1, 33, 23, 4, 19},
{19, 86, 91, 25, 34, 27, 16, 9, 7, 20, 7, 26, 17, 23, 4, 16, 9, 12, 4, 31, 28, 27},
{19, 88, 100, 22, 13, 17, 36, 9, 4, 21, 31, 2, 11, 23, 15, 8, 7, 1, 12, 47, 6, 41},
{20, 33, 55, 9, 10, 14, 8, 1, 7, 4, 7, 11, 11, 4, 7, 4, 3, 12, 12, 9, 3, 18, 15},
{20, 51, 66, 15, 16, 20, 14, 1, 13, 4, 24, 12, 15, 9, 3, 6, 5, 9, 22, 1, 4, 16, 13},
{20, 52, 74, 15, 13, 24, 2, 11, 17, 8, 27, 14, 11, 3, 8, 12, 5, 7, 10, 23, 16, 3, 13},
{20, 68, 86, 18, 17, 33, 1, 16, 19, 4, 17, 28, 23, 10, 7, 3, 4, 26, 9, 1, 8, 25, 17},
{20, 70, 72, 21, 17, 32, 4, 13, 16, 9, 6, 16, 14, 18, 1, 5, 13, 4, 9, 26, 4, 22, 22},
{20, 73, 96, 24, 20, 29, 11, 9, 17, 7, 12, 26, 10, 8, 6, 2, 23, 4, 14, 10, 9, 41, 32},
{20, 73, 111, 23, 21, 29, 2, 19, 25, 10, 19, 1, 9, 8, 12, 29, 4, 4, 24, 20, 5, 39, 34},

```

```

{20, 78, 118, 22, 30, 26, 14, 8, 9, 17, 6, 26, 6, 1, 8, 20, 7, 32, 27, 19, 8, 43, 35},
{21, 29, 43, 8, 9, 12, 7, 1, 6, 4, 1, 3, 8, 3, 2, 12, 1, 5, 4, 7, 10, 16, 3, 13},
{21, 39, 40, 11, 10, 18, 1, 9, 7, 5, 2, 3, 9, 8, 10, 5, 7, 3, 2, 1, 14, 2, 13, 12},
{21, 40, 41, 7, 6, 12, 15, 1, 5, 8, 4, 1, 10, 3, 12, 7, 11, 5, 8, 4, 15, 14, 3, 11},
{21, 62, 80, 20, 18, 24, 2, 10, 6, 14, 8, 9, 21, 6, 7, 5, 2, 12, 19, 1, 10, 8, 35, 27},
{21, 75, 85, 24, 7, 8, 12, 24, 6, 1, 5, 4, 16, 11, 27, 8, 4, 20, 4, 16, 12, 7, 41, 34},
{21, 78, 91, 15, 16, 11, 15, 21, 5, 6, 14, 1, 9, 6, 13, 8, 1, 7, 27, 24, 27, 8, 43, 35},
{19, 58, 83, 17, 18, 23, 16, 1, 13, 6, 1, 8, 14, 7, 2, 20, 6, 18, 20, 32, 6, 26},
{19, 60, 78, 22, 15, 23, 7, 8, 15, 14, 11, 20, 2, 9, 1, 8, 7, 16, 1, 35, 9, 25},
{19, 68, 70, 14, 10, 16, 11, 17, 4, 6, 5, 6, 18, 16, 11, 23, 5, 6, 38, 1, 7, 30},
{19, 72, 77, 18, 10, 12, 32, 8, 2, 14, 26, 8, 6, 2, 12, 24, 10, 33, 15, 3, 21, 18},
{19, 79, 91, 25, 13, 14, 27, 12, 1, 15, 26, 11, 2, 25, 7, 10, 15, 3, 13, 40, 1, 39},
{19, 84, 86, 14, 13, 25, 32, 1, 12, 15, 4, 23, 10, 19, 3, 29, 13, 38, 17, 4, 25, 21},
{20, 39, 42, 12, 10, 17, 2, 8, 8, 6, 1, 4, 12, 2, 10, 3, 10, 7, 2, 14, 1, 13, 12},
{20, 53, 56, 14, 20, 19, 9, 5, 4, 1, 5, 14, 3, 14, 4, 16, 9, 23, 5, 9, 17, 4, 13},
{20, 72, 72, 17, 13, 22, 20, 4, 9, 21, 2, 18, 17, 16, 16, 5, 34, 4, 13, 9, 2, 20, 18},
{20, 80, 85, 21, 22, 37, 20, 1, 23, 16, 21, 16, 4, 12, 15, 7, 4, 5, 28, 3, 1, 27, 25},
{21, 78, 111, 24, 25, 29, 19, 5, 4, 17, 4, 9, 13, 20, 5, 4, 1, 26, 7, 25, 27, 43, 8, 35},
{19, 77, 88, 20, 27, 30, 13, 7, 6, 25, 3, 33, 19, 36, 8, 5, 3, 2, 9, 25, 7, 16},
{19, 85, 91, 25, 21, 39, 4, 17, 29, 16, 1, 15, 25, 37, 16, 7, 4, 3, 1, 27, 5, 21},
{19, 96, 100, 28, 23, 45, 5, 18, 33, 14, 4, 10, 12, 27, 6, 16, 2, 14, 39, 29, 1, 28},
{20, 73, 73, 17, 12, 19, 25, 5, 7, 22, 20, 6, 14, 17, 34, 14, 8, 5, 12, 6, 7, 20, 19},
{20, 88, 95, 22, 27, 39, 17, 5, 12, 20, 29, 8, 11, 20, 23, 5, 2, 9, 7, 36, 27, 2, 25},
{21, 60, 70, 15, 18, 27, 12, 3, 9, 12, 15, 6, 3, 24, 3, 12, 9, 28, 8, 7, 1, 6, 19, 13},
{21, 59, 70, 14, 20, 25, 9, 5, 4, 1, 16, 5, 13, 11, 8, 11, 3, 5, 34, 9, 2, 9, 7, 25},
{19, 30, 30, 9, 8, 13, 1, 4, 3, 10, 1, 2, 5, 7, 8, 2, 3, 11, 1, 10, 1, 9},
{19, 50, 68, 14, 10, 9, 17, 1, 8, 4, 7, 15, 3, 11, 24, 1, 10, 16, 7, 3, 27, 23},
{19, 55, 64, 19, 14, 22, 5, 9, 17, 7, 7, 15, 3, 6, 10, 5, 8, 2, 3, 28, 1, 27},
{19, 55, 64, 19, 16, 20, 3, 8, 5, 17, 5, 3, 17, 3, 2, 5, 12, 4, 9, 28, 1, 27},
{19, 62, 94, 22, 17, 23, 5, 12, 20, 7, 6, 17, 14, 11, 3, 25, 19, 1, 18, 33, 4, 29},
{19, 64, 73, 13, 10, 20, 21, 3, 7, 12, 4, 8, 3, 17, 6, 5, 16, 20, 11, 8, 36, 28},
{19, 66, 94, 23, 18, 25, 5, 6, 7, 20, 7, 1, 6, 1, 33, 13, 21, 12, 9, 3, 36, 30},
{19, 68, 96, 12, 13, 17, 26, 11, 1, 10, 4, 12, 9, 21, 3, 32, 15, 22, 14, 8, 38, 30},
{19, 68, 96, 25, 17, 26, 8, 9, 19, 10, 4, 3, 32, 7, 9, 1, 8, 22, 14, 8, 38, 30},
{19, 70, 86, 22, 25, 23, 19, 3, 2, 21, 11, 19, 5, 6, 17, 6, 1, 5, 2, 42, 11, 28},
{19, 70, 101, 16, 13, 14, 27, 3, 9, 1, 8, 7, 19, 1, 6, 13, 5, 38, 32, 2, 36, 34},
{19, 71, 72, 19, 21, 31, 17, 2, 23, 13, 18, 9, 8, 3, 8, 28, 5, 7, 2, 5, 23, 20},
{19, 71, 85, 22, 26, 23, 16, 6, 3, 20, 2, 10, 17, 8, 2, 9, 7, 18, 2, 42, 11, 29},
{19, 71, 97, 19, 23, 29, 11, 8, 4, 13, 6, 3, 9, 7, 28, 14, 8, 21, 22, 9, 40, 31},
{19, 71, 98, 17, 10, 12, 11, 21, 8, 2, 1, 10, 6, 9, 16, 1, 15, 40, 31, 3, 37, 34},
{19, 72, 99, 22, 18, 32, 4, 14, 17, 9, 8, 1, 7, 40, 32, 28, 4, 3, 10, 27, 7, 17},
{19, 75, 96, 23, 20, 32, 3, 5, 12, 24, 2, 7, 15, 36, 22, 17, 5, 12, 8, 28, 27, 20},
{19, 76, 86, 17, 32, 27, 9, 8, 1, 7, 10, 8, 19, 4, 18, 14, 3, 11, 14, 4, 40, 36},
{19, 79, 95, 15, 8, 9, 19, 28, 7, 1, 10, 22, 20, 9, 11, 26, 20, 2, 18, 15, 41, 38},
{19, 80, 107, 26, 20, 34, 6, 14, 24, 8, 13, 14, 29, 3, 9, 1, 15, 21, 6, 15, 44, 36},
{19, 80, 115, 34, 46, 22, 12, 10, 9, 14, 25, 1, 8, 23, 10, 3, 11, 3, 8, 13, 44, 36},
{19, 81, 94, 25, 30, 26, 16, 9, 4, 22, 4, 12, 18, 5, 8, 2, 3, 18, 17, 6, 46, 35},
{19, 83, 101, 25, 28, 30, 18, 7, 4, 15, 9, 7, 23, 11, 16, 23, 11, 10, 1, 48, 12, 35},
{19, 90, 106, 28, 32, 30, 24, 4, 9, 21, 20, 9, 7, 2, 14, 11, 2, 19, 54, 1, 17, 36},
{19, 94, 95, 23, 16, 20, 35, 7, 9, 5, 15, 20, 8, 2, 6, 10, 14, 60, 18, 2, 16, 34},

```

```

{19, 94, 96, 28, 25, 41, 3, 22, 31, 14, 27, 12, 10, 2, 12, 2, 10, 37, 8, 29, 1, 28},
{19, 96, 97, 28, 24, 44, 4, 20, 32, 7, 10, 22, 25, 4, 3, 1, 12, 5, 37, 31, 3, 28},
{19, 96, 100, 28, 25, 43, 3, 22, 31, 14, 29, 12, 10, 2, 6, 16, 41, 4, 10, 1, 28, 27},
{19, 97, 99, 21, 18, 19, 39, 5, 12, 1, 20, 19, 2, 7, 10, 9, 8, 60, 22, 7, 15, 37},
{20, 36, 56, 14, 22, 8, 6, 2, 4, 10, 2, 7, 13, 6, 1, 6, 2, 5, 9, 3, 6, 21, 15},
{20, 37, 46, 13, 11, 13, 2, 5, 4, 12, 3, 5, 8, 1, 3, 9, 5, 3, 2, 9, 7, 21, 16},
{20, 42, 68, 14, 13, 15, 1, 10, 2, 15, 8, 9, 6, 11, 1, 10, 16, 5, 11, 15, 23, 4, 19},
{20, 52, 58, 14, 13, 25, 1, 12, 15, 6, 15, 16, 12, 3, 1, 5, 4, 5, 4, 18, 1, 17, 17},
{20, 54, 60, 11, 12, 16, 15, 10, 1, 9, 4, 1, 14, 8, 13, 16, 3, 6, 5, 1, 31, 7, 23},
{20, 56, 66, 13, 16, 9, 18, 4, 5, 9, 4, 3, 1, 2, 4, 1, 20, 5, 22, 14, 30, 4, 26},
{20, 61, 67, 18, 20, 23, 16, 2, 14, 8, 7, 16, 6, 2, 4, 5, 33, 5, 2, 1, 4, 3, 28},
{20, 73, 73, 21, 11, 13, 28, 9, 2, 15, 1, 8, 22, 15, 13, 23, 2, 11, 30, 9, 1, 22, 21},
{20, 75, 90, 23, 24, 28, 22, 1, 21, 4, 15, 17, 2, 9, 4, 45, 2, 15, 6, 8, 1, 7, 30},
{20, 75, 98, 26, 22, 27, 11, 7, 4, 19, 7, 3, 1, 28, 10, 12, 6, 16, 21, 10, 11, 43, 32},
{21, 31, 36, 8, 12, 11, 5, 3, 2, 1, 3, 8, 4, 7, 2, 4, 3, 5, 1, 6, 5, 3, 17, 14},
{21, 44, 54, 11, 10, 23, 1, 9, 12, 4, 5, 16, 2, 5, 16, 4, 1, 3, 12, 15, 1, 1, 15, 14},
{21, 47, 67, 20, 27, 13, 7, 6, 5, 8, 15, 1, 4, 12, 5, 3, 1, 7, 2, 6, 7, 3, 25, 22},
{21, 63, 95, 31, 32, 16, 11, 4, 3, 14, 15, 7, 5, 9, 4, 17, 1, 17, 4, 16, 13, 1, 32, 31},
{21, 70, 88, 22, 18, 30, 4, 14, 16, 10, 9, 21, 6, 11, 7, 17, 5, 4, 12, 12, 8, 4, 37, 33},
{21, 75, 96, 27, 20, 28, 8, 12, 20, 6, 1, 5, 4, 4, 24, 20, 11, 3, 8, 18, 5, 13, 44, 31},
{23, 52, 64, 19, 13, 20, 6, 7, 11, 8, 5, 1, 4, 7, 17, 6, 3, 5, 3, 10, 9, 2, 9, 7, 27, 25},
{19, 36, 44, 11, 6, 7, 12, 5, 1, 8, 12, 4, 3, 9, 8, 7, 1, 8, 1, 7, 21, 15},
{19, 38, 44, 10, 8, 9, 11, 2, 5, 1, 4, 6, 12, 4, 7, 9, 7, 3, 10, 22, 6, 16},
{19, 40, 61, 13, 10, 17, 3, 7, 12, 4, 6, 10, 12, 2, 4, 14, 12, 2, 14, 22, 4, 18},
{19, 48, 75, 16, 12, 20, 4, 8, 14, 6, 2, 10, 16, 8, 26, 6, 22, 19, 7, 5, 17, 12},
{19, 53, 61, 13, 9, 14, 17, 4, 5, 17, 16, 3, 6, 5, 9, 1, 4, 7, 13, 31, 9, 22},
{19, 56, 75, 20, 14, 22, 6, 8, 15, 11, 9, 21, 3, 5, 12, 1, 2, 16, 7, 8, 32, 24},
{19, 60, 64, 16, 10, 14, 20, 6, 4, 7, 11, 17, 5, 5, 15, 12, 6, 10, 2, 4, 31, 29},
{19, 60, 70, 19, 18, 23, 1, 10, 7, 20, 2, 3, 18, 3, 5, 1, 4, 11, 2, 11, 31, 29},
{19, 60, 95, 27, 33, 21, 6, 21, 18, 16, 5, 3, 15, 4, 1, 3, 10, 12, 7, 31, 2, 29},
{19, 64, 90, 19, 23, 22, 15, 4, 1, 5, 16, 11, 13, 4, 9, 26, 20, 2, 18, 4, 34, 30},
{19, 64, 104, 19, 16, 29, 3, 13, 12, 10, 2, 16, 34, 14, 30, 12, 22, 29, 13, 3, 19, 16},
{19, 67, 115, 32, 35, 21, 8, 3, 5, 18, 15, 13, 3, 12, 27, 19, 9, 21, 8, 11, 35, 32},
{19, 68, 80, 18, 22, 28, 14, 4, 11, 15, 9, 19, 13, 1, 12, 8, 6, 10, 2, 4, 35, 33},
{19, 68, 105, 25, 17, 26, 8, 9, 19, 14, 12, 23, 1, 11, 5, 10, 24, 19, 25, 37, 6, 31},
{19, 69, 100, 22, 19, 28, 10, 9, 15, 7, 1, 11, 25, 8, 10, 23, 21, 7, 18, 40, 11, 29},
{19, 71, 118, 32, 39, 17, 8, 7, 1, 10, 12, 23, 9, 34, 2, 14, 3, 20, 17, 1, 36, 35},
{19, 72, 73, 17, 18, 16, 21, 2, 8, 6, 16, 1, 15, 6, 1, 20, 7, 9, 5, 12, 40, 32},
{19, 72, 123, 22, 27, 23, 17, 5, 4, 19, 12, 9, 15, 3, 6, 32, 40, 21, 11, 10, 41, 31},
{19, 74, 90, 22, 25, 27, 19, 3, 18, 7, 3, 1, 5, 21, 4, 16, 17, 2, 15, 5, 42, 32},
{19, 75, 84, 25, 22, 28, 3, 11, 8, 19, 9, 7, 21, 3, 5, 1, 11, 2, 10, 14, 40, 35},
{19, 75, 91, 27, 18, 30, 9, 5, 4, 1, 3, 4, 2, 5, 26, 14, 11, 24, 12, 13, 38, 37},
{19, 75, 94, 21, 23, 31, 19, 2, 17, 8, 9, 30, 30, 15, 9, 6, 3, 33, 12, 24, 6, 18},
{19, 77, 85, 26, 23, 28, 10, 13, 19, 7, 8, 20, 12, 5, 2, 7, 12, 7, 2, 5, 40, 37},
{19, 78, 92, 27, 23, 28, 7, 11, 5, 24, 3, 6, 27, 10, 6, 11, 11, 5, 6, 10, 41, 37},
{19, 82, 105, 25, 24, 33, 1, 15, 8, 26, 7, 1, 10, 24, 18, 4, 14, 20, 6, 14, 48, 34},
{19, 85, 108, 25, 11, 8, 13, 28, 3, 5, 14, 18, 33, 6, 3, 25, 27, 5, 20, 50, 15, 35},
{19, 88, 96, 22, 18, 21, 27, 4, 11, 3, 8, 10, 6, 26, 4, 29, 19, 14, 3, 11, 48, 40},
{20, 29, 40, 9, 7, 13, 2, 5, 7, 4, 1, 3, 1, 3, 2, 2, 12, 7, 10, 4, 3, 15, 14},
{20, 35, 40, 7, 12, 7, 9, 4, 3, 5, 2, 11, 1, 2, 5, 4, 7, 8, 9, 6, 1, 20, 15},

```

```

{20, 44, 61, 12, 11, 8, 13, 3, 5, 1, 11, 2, 13, 9, 11, 3, 15, 2, 13, 16, 4, 24, 20},
{20, 55, 73, 16, 15, 24, 1, 5, 9, 13, 4, 9, 11, 22, 16, 6, 10, 7, 3, 4, 28, 1, 27},
{20, 56, 73, 13, 16, 13, 14, 9, 4, 12, 1, 15, 1, 6, 9, 5, 20, 17, 4, 19, 31, 6, 25},
{20, 57, 66, 19, 15, 23, 8, 7, 15, 4, 2, 5, 11, 1, 5, 18, 3, 7, 1, 6, 32, 7, 25},
{20, 58, 59, 15, 8, 7, 13, 15, 1, 6, 9, 8, 9, 2, 13, 2, 17, 11, 7, 1, 10, 31, 27},
{20, 61, 70, 19, 18, 24, 1, 11, 6, 20, 5, 9, 16, 10, 6, 2, 7, 3, 5, 1, 2, 31, 30},
{20, 63, 86, 18, 12, 10, 23, 2, 8, 5, 9, 1, 4, 19, 3, 5, 16, 28, 21, 14, 7, 35, 28},
{20, 65, 98, 28, 37, 19, 9, 10, 11, 25, 22, 5, 2, 1, 4, 6, 3, 10, 2, 8, 7, 36, 29},
{20, 70, 94, 19, 24, 27, 10, 9, 4, 12, 5, 3, 2, 28, 1, 12, 11, 7, 19, 23, 8, 39, 31},
{20, 72, 72, 14, 9, 16, 13, 20, 5, 4, 1, 3, 4, 9, 20, 18, 1, 5, 2, 18, 16, 38, 34},
{20, 72, 72, 14, 10, 9, 17, 22, 1, 8, 4, 7, 18, 15, 8, 9, 4, 18, 7, 1, 14, 40, 32},
{20, 72, 92, 17, 15, 7, 5, 8, 20, 2, 3, 8, 1, 12, 2, 21, 19, 32, 24, 16, 8, 40, 32},
{20, 78, 81, 25, 23, 30, 2, 12, 9, 27, 8, 22, 3, 6, 15, 14, 2, 11, 2, 29, 9, 29, 20},
{20, 83, 88, 20, 17, 22, 24, 3, 14, 23, 11, 9, 2, 26, 12, 2, 2, 7, 10, 5, 12, 45, 38},
{20, 88, 107, 23, 29, 36, 17, 6, 11, 17, 7, 15, 28, 22, 6, 16, 7, 2, 13, 9, 45, 2, 43},
{20, 89, 104, 29, 14, 17, 29, 11, 3, 8, 12, 4, 15, 33, 13, 28, 13, 2, 15, 9, 4, 47, 42},
{21, 35, 45, 10, 12, 13, 7, 3, 1, 4, 7, 4, 6, 7, 1, 3, 10, 2, 8, 9, 1, 8, 18, 17},
{21, 41, 52, 11, 13, 17, 9, 2, 4, 5, 6, 3, 1, 3, 14, 6, 5, 1, 12, 4, 8, 7, 21, 20},
{21, 46, 51, 11, 9, 11, 15, 2, 7, 13, 4, 7, 1, 3, 7, 8, 8, 6, 4, 10, 1, 9, 27, 19},
{21, 54, 58, 16, 8, 5, 7, 18, 3, 2, 9, 11, 13, 3, 7, 2, 5, 15, 10, 4, 6, 10, 29, 25},
{21, 60, 67, 16, 14, 11, 19, 3, 8, 2, 9, 6, 18, 1, 5, 21, 3, 4, 11, 1, 10, 33, 6, 27},
{21, 80, 109, 29, 22, 29, 7, 8, 7, 24, 8, 3, 1, 36, 2, 7, 5, 20, 20, 4, 16, 8, 44, 36},
{21, 80, 117, 27, 20, 33, 7, 13, 34, 24, 22,
  6, 16, 6, 14, 4, 22, 10, 2, 10, 8, 12, 46, 34},
{21, 83, 97, 26, 14, 16, 27, 12, 2, 7, 11, 3, 4, 27, 13, 1, 12, 31, 14, 11, 3, 8, 44, 39},
{19, 52, 61, 13, 16, 23, 9, 4, 1, 6, 9, 5, 17, 3, 2, 21, 14, 22, 9, 4, 17, 13},
{19, 61, 98, 25, 36, 16, 9, 7, 2, 6, 13, 19, 22, 1, 7, 14, 6, 8, 17, 35, 9, 26},
{19, 64, 75, 17, 22, 25, 12, 5, 7, 6, 11, 3, 28, 1, 5, 20, 16, 26, 10, 6, 22, 16},
{19, 68, 73, 22, 18, 28, 4, 14, 26, 9, 19, 9, 5, 4, 10, 7, 6, 9, 26, 25, 8, 17},
{19, 83, 89, 20, 14, 18, 31, 5, 9, 5, 13, 1, 4, 21, 18, 10, 11, 23, 48, 1, 12, 35},
{19, 88, 97, 30, 21, 37, 9, 12, 36, 3, 15, 12, 25, 14, 1, 13, 4, 13, 35, 31, 9, 22},
{20, 33, 40, 11, 10, 12, 1, 4, 5, 9, 3, 4, 8, 6, 1, 5, 1, 5, 20, 1, 7, 6, 13},
{20, 69, 75, 20, 26, 23, 14, 6, 3, 20, 8, 10, 17, 20, 2, 12, 5, 32, 6, 11, 21, 5, 16},
{20, 69, 109, 29, 40, 19, 10, 9, 1, 8, 19, 14, 25, 11, 5, 9, 14, 17, 4, 13, 36, 3, 33},
{20, 72, 76, 16, 20, 36, 12, 4, 8, 16, 20, 7, 9, 17, 19, 5, 2, 3, 8, 28, 23, 2, 21},
{20, 78, 115, 26, 21, 31, 10, 11, 21, 5, 14, 1, 1, 30, 13, 2, 25, 23, 9, 21, 45, 12, 33},
{21, 25, 27, 8, 6, 11, 2, 4, 10, 3, 1, 2, 3, 7, 4, 1, 4, 1, 3, 9, 2, 2, 9, 7},
{21, 64, 69, 17, 10, 12, 25, 7, 3, 1, 5, 6, 4, 24, 8, 1, 7, 16, 24, 28, 12, 4, 20, 16},
{21, 81, 104, 20, 28, 33, 13, 7, 6, 1, 24, 5, 19, 38, 24, 19, 5, 6, 13, 33, 28, 1, 7, 20},
{21, 72, 85, 25, 22, 25, 3, 8, 11, 16, 7, 5, 8, 17, 2, 11, 9, 8, 11, 44, 2, 15, 13, 28},
{19, 66, 84, 20, 21, 25, 19, 1, 18, 4, 14, 15, 45, 5, 1, 4, 12, 9, 1, 11, 10, 21},
{19, 42, 58, 13, 11, 18, 2, 9, 8, 7, 2, 16, 1, 3, 14, 7, 2, 5, 12, 6, 24, 18},
{19, 45, 75, 21, 24, 18, 3, 13, 14, 2, 10, 1, 15, 13, 7, 6, 1, 5, 6, 23, 1, 22},
{19, 50, 63, 16, 13, 21, 3, 10, 19, 2, 11, 8, 12, 3, 5, 3, 9, 2, 7, 28, 6, 22},
{19, 52, 69, 16, 13, 23, 3, 10, 13, 6, 5, 1, 4, 11, 19, 2, 7, 15, 10, 8, 27, 25},
{19, 54, 76, 25, 29, 11, 8, 6, 2, 8, 19, 2, 6, 3, 7, 14, 3, 11, 10, 2, 28, 26},
{19, 64, 95, 18, 16, 30, 2, 14, 20, 16, 28, 13, 7, 6, 1, 5, 12, 17, 7, 10, 37, 27},
{19, 65, 71, 17, 16, 32, 6, 10, 12, 5, 7, 4, 3, 5, 6, 16, 6, 4, 1, 39, 10, 26},
{19, 67, 74, 20, 22, 25, 18, 2, 16, 8, 7, 18, 6, 2, 4, 5, 2, 7, 1, 6, 36, 31},
{19, 67, 86, 30, 37, 21, 5, 4, 1, 3, 6, 4, 10, 9, 17, 10, 1, 8, 4, 7, 35, 32},

```



```

{19, 71, 104, 31, 40, 19, 12, 3, 11, 26, 7, 8, 21, 5, 4, 15, 9, 7, 2, 5, 38, 33},
{19, 72, 93, 19, 12, 17, 24, 7, 5, 2, 13, 7, 17, 11, 31, 6, 18, 23, 11, 7, 38, 34},
{19, 76, 108, 21, 19, 36, 2, 17, 23, 8, 12, 33, 27, 4, 16, 7, 4, 5, 3, 1, 39, 37},
{19, 78, 96, 28, 19, 31, 7, 12, 2, 5, 30, 11, 12, 25, 10, 1, 13, 6, 4, 2, 40, 38},
{19, 79, 99, 16, 12, 20, 31, 4, 8, 14, 6, 2, 10, 16, 8, 32, 5, 26, 21, 5, 42, 37},
{19, 80, 107, 22, 20, 38, 2, 18, 24, 8, 9, 12, 27, 23, 8, 1, 7, 3, 15, 15, 42, 38},
{19, 82, 103, 21, 17, 18, 26, 4, 12, 1, 11, 8, 17, 8, 34, 9, 22, 26, 13, 9, 43, 39},
{19, 82, 115, 38, 44, 18, 11, 9, 3, 13, 28, 2, 10, 5, 8, 2, 3, 20, 19, 15, 43, 39},
{19, 83, 116, 36, 47, 17, 9, 10, 8, 1, 10, 1, 9, 12, 27, 22, 3, 19, 3, 15, 42, 41},
{19, 85, 113, 19, 12, 24, 30, 7, 5, 2, 3, 27, 1, 4, 22, 6, 36, 29, 20, 9, 47, 38},
{20, 33, 48, 8, 10, 15, 6, 2, 4, 3, 5, 1, 2, 11, 8, 14, 2, 6, 9, 4, 5, 19, 14},
{20, 36, 53, 11, 9, 16, 2, 7, 8, 5, 3, 7, 18, 7, 4, 3, 8, 10, 5, 3, 2, 19, 17},
{20, 46, 55, 15, 12, 19, 3, 5, 4, 16, 2, 1, 3, 6, 2, 4, 6, 14, 8, 2, 8, 24, 22},
{20, 46, 55, 15, 12, 19, 3, 5, 4, 16, 2, 1, 3, 8, 8, 14, 6, 2, 4, 6, 24, 2, 22},
{20, 57, 80, 20, 14, 23, 5, 9, 1, 4, 18, 3, 12, 27, 3, 9, 15, 6, 9, 6, 3, 30, 27},
{20, 59, 72, 19, 16, 24, 3, 13, 22, 5, 8, 11, 12, 6, 3, 5, 9, 2, 9, 7, 31, 3, 28},
{20, 60, 80, 19, 17, 24, 2, 8, 7, 15, 6, 6, 25, 9, 5, 11, 17, 7, 10, 8, 2, 31, 29},
{20, 61, 67, 18, 20, 23, 16, 2, 14, 8, 3, 4, 16, 2, 1, 5, 6, 4, 2, 7, 33, 5, 28},
{20, 66, 66, 11, 7, 10, 12, 26, 4, 3, 11, 2, 15, 14, 4, 7, 1, 3, 14, 2, 40, 12, 26},
{20, 66, 66, 15, 7, 6, 11, 27, 1, 5, 8, 16, 11, 12, 6, 5, 4, 12, 39, 1, 8, 7, 27},
{20, 66, 97, 21, 17, 28, 6, 11, 11, 7, 3, 1, 5, 4, 4, 19, 32, 15, 21, 13, 8, 37, 29},
{20, 69, 76, 19, 15, 35, 4, 11, 13, 10, 6, 5, 3, 7, 1, 4, 16, 4, 3, 1, 41, 12, 28},
{20, 70, 73, 23, 22, 25, 1, 15, 6, 24, 3, 22, 9, 10, 8, 6, 2, 4, 10, 26, 8, 26, 18},
{20, 71, 82, 26, 18, 27, 8, 10, 22, 10, 2, 1, 8, 18, 8, 5, 3, 2, 10, 12, 9, 37, 34},
{20, 74, 91, 17, 14, 16, 27, 3, 9, 2, 7, 11, 20, 16, 12, 26, 18, 2, 16, 14, 2, 38, 36},
{20, 78, 100, 18, 13, 21, 26, 5, 8, 20, 3, 11, 16, 5, 31, 6, 5, 1, 20, 27, 8, 43, 35},
{20, 84, 112, 21, 26, 37, 16, 5, 11, 20, 18, 9, 9, 28, 7, 12, 19, 2, 5, 20, 17, 47, 37},
{20, 87, 88, 24, 26, 37, 15, 9, 7, 8, 11, 8, 7, 1, 6, 3, 51, 13, 2, 1, 12, 11, 36},
{20, 88, 90, 18, 13, 21, 36, 5, 8, 20, 3, 9, 8, 15, 1, 7, 10, 4, 54, 18, 2, 16, 34},
{20, 97, 100, 33, 21, 43, 9, 12, 4, 5, 27, 5, 1, 2, 10, 4, 1, 8, 9, 4, 57, 13, 40},
{21, 45, 63, 11, 16, 18, 6, 5, 2, 5, 12, 2, 5, 1, 3, 20, 1, 7, 6, 15, 10, 5, 25, 20},
{21, 62, 63, 14, 11, 12, 25, 3, 7, 1, 13, 11, 6, 2, 5, 5, 3, 2, 6, 14, 4, 38, 10, 24},
{21, 63, 68, 18, 17, 28, 6, 11, 13, 5, 6, 5, 1, 3, 40, 2, 3, 2, 14, 1, 5, 4, 9, 23},
{21, 67, 93, 15, 21, 31, 9, 6, 3, 8, 16, 7, 5, 2, 11, 9, 6, 25, 3, 19, 23, 7, 37, 30},
{21, 68, 80, 24, 20, 24, 4, 9, 7, 23, 5, 3, 21, 10, 8, 6, 2, 4, 10, 2, 8, 6, 35, 33},
{21, 74, 76, 25, 17, 32, 9, 8, 21, 4, 1, 7, 4, 6, 3, 1, 2, 3, 5, 1, 44, 4, 9, 30},
{21, 91, 104, 33, 25, 33, 8, 9, 8, 23, 10, 7, 1, 13, 28, 10, 3, 4, 13, 12, 2, 15, 48, 43},
{21, 94, 94, 18, 14, 24, 38, 4, 10, 15, 7, 1, 9, 10, 14, 8, 23, 8, 1, 7, 4, 56, 15, 38},
{23, 61, 68, 17, 11, 16, 17, 6, 5, 1, 19, 1, 13, 11, 18, 5, 6, 10, 3, 7, 1, 6, 1, 5,
  33, 28}, {19, 30, 37, 9, 10, 11, 4, 5, 4, 5, 1, 12, 3, 1, 2, 7, 1, 6, 5, 16, 2, 14},
{19, 31, 35, 5, 3, 4, 9, 10, 2, 1, 5, 7, 4, 9, 1, 11, 6, 1, 5, 17, 3, 14},
{19, 32, 57, 13, 19, 7, 6, 1, 9, 15, 8, 11, 6, 5, 3, 4, 9, 2, 1, 5, 18, 14},
{19, 34, 40, 9, 11, 14, 7, 2, 6, 7, 4, 10, 6, 1, 5, 2, 1, 4, 6, 3, 18, 16},
{19, 40, 53, 10, 12, 18, 7, 3, 1, 5, 6, 4, 15, 1, 9, 16, 5, 4, 1, 3, 21, 19},
{19, 41, 65, 17, 24, 11, 6, 5, 1, 4, 10, 11, 14, 6, 8, 7, 1, 12, 1, 6, 23, 18},
{19, 42, 74, 17, 25, 9, 8, 1, 11, 8, 13, 10, 3, 5, 18, 6, 4, 14, 10, 2, 22, 20},
{19, 43, 51, 7, 6, 12, 18, 1, 5, 8, 4, 1, 7, 6, 12, 1, 9, 14, 8, 24, 5, 19},
{19, 50, 56, 10, 13, 9, 18, 4, 5, 7, 3, 4, 15, 1, 6, 11, 2, 16, 8, 28, 6, 22},
{19, 50, 57, 13, 8, 10, 19, 5, 3, 1, 9, 4, 16, 2, 6, 2, 10, 16, 8, 28, 6, 22},
{19, 51, 64, 11, 8, 13, 19, 3, 5, 10, 4, 2, 10, 6, 6, 4, 21, 16, 14, 27, 3, 24},

```

```

{19, 51, 86, 23, 28, 18, 5, 14, 10, 9, 1, 8, 4, 7, 17, 1, 16, 3, 18, 28, 5, 23},
{19, 52, 60, 14, 8, 10, 20, 6, 2, 4, 8, 17, 7, 3, 5, 3, 17, 10, 8, 29, 6, 23},
{19, 52, 60, 14, 8, 10, 20, 6, 2, 4, 8, 19, 5, 1, 7, 6, 5, 15, 8, 10, 27, 25},
{19, 58, 70, 19, 15, 24, 4, 11, 23, 2, 6, 16, 9, 4, 10, 4, 5, 3, 1, 2, 30, 28},
{19, 59, 69, 20, 16, 23, 4, 5, 7, 17, 5, 2, 1, 4, 3, 11, 19, 12, 3, 8, 32, 27},
{19, 61, 68, 16, 10, 14, 21, 6, 4, 2, 5, 11, 21, 3, 8, 4, 17, 2, 13, 10, 31, 30},
{19, 61, 91, 21, 40, 11, 10, 1, 9, 12, 4, 11, 13, 21, 16, 9, 2, 7, 8, 31, 1, 30},
{19, 61, 91, 24, 37, 11, 13, 9, 2, 7, 11, 10, 24, 16, 1, 9, 12, 4, 5, 31, 1, 30},
{19, 62, 89, 23, 39, 14, 9, 5, 4, 1, 3, 20, 10, 12, 20, 8, 2, 6, 8, 32, 2, 30},
{19, 64, 74, 17, 12, 13, 22, 5, 6, 1, 5, 9, 22, 11, 8, 23, 10, 1, 9, 35, 6, 29},
{19, 66, 68, 14, 11, 19, 22, 3, 8, 17, 12, 7, 8, 5, 17, 5, 2, 1, 12, 3, 37, 29},
{19, 67, 107, 28, 39, 17, 11, 6, 15, 16, 13, 23, 3, 10, 14, 1, 13, 7, 17, 39, 11, 28},
{19, 69, 80, 23, 18, 28, 5, 13, 20, 8, 8, 20, 12, 4, 5, 3, 1, 2, 12, 5, 37, 32},
{19, 69, 80, 23, 20, 26, 3, 5, 12, 22, 4, 2, 3, 6, 20, 5, 1, 4, 13, 14, 35, 34},
{19, 76, 102, 22, 20, 34, 2, 7, 11, 19, 5, 12, 8, 3, 5, 32, 2, 23, 21, 40, 4, 36},
{19, 77, 96, 23, 19, 35, 4, 15, 16, 11, 5, 9, 12, 11, 24, 17, 4, 13, 10, 13, 40, 37},
{19, 78, 119, 31, 47, 15, 16, 11, 4, 3, 12, 26, 22, 7, 16, 2, 14, 4, 18, 46, 14, 32},
{19, 80, 107, 19, 13, 17, 31, 6, 7, 3, 14, 24, 1, 11, 12, 44, 36, 12, 32, 28, 8, 20},
{19, 80, 107, 21, 24, 35, 18, 3, 15, 12, 1, 34, 4, 9, 26, 6, 1, 5, 20, 42, 4, 38},
{19, 81, 100, 25, 23, 33, 13, 10, 14, 11, 4, 9, 30, 3, 20, 1, 5, 17, 14, 44, 7, 37},
{19, 84, 110, 22, 10, 8, 14, 30, 2, 6, 12, 8, 5, 7, 3, 2, 9, 45, 39, 43, 2, 41},
{19, 88, 100, 16, 19, 21, 32, 13, 3, 10, 12, 10, 11, 23, 21, 1, 16, 28, 4, 12, 48, 40},
{19, 96, 97, 20, 23, 53, 17, 3, 14, 12, 2, 3, 7, 32, 1, 4, 11, 20, 44, 28, 4, 24},
{20, 45, 52, 16, 12, 17, 5, 7, 11, 5, 3, 2, 2, 15, 3, 8, 1, 2, 6, 5, 25, 5, 20},
{20, 47, 72, 19, 28, 12, 7, 5, 2, 5, 13, 12, 15, 2, 7, 6, 1, 1, 11, 5, 10, 26, 21},
{20, 50, 64, 10, 8, 10, 22, 6, 2, 6, 4, 12, 3, 7, 5, 1, 4, 16, 15, 19, 27, 4, 23},
{20, 54, 66, 9, 10, 15, 20, 8, 1, 7, 4, 3, 1, 2, 9, 5, 20, 4, 21, 13, 29, 4, 25},
{20, 66, 68, 13, 9, 8, 13, 23, 1, 7, 4, 6, 17, 2, 11, 15, 6, 17, 6, 5, 11, 38, 28},
{20, 66, 80, 22, 19, 25, 13, 6, 12, 10, 7, 24, 2, 5, 13, 10, 11, 3, 8, 3, 7, 35, 31},
{20, 71, 114, 30, 41, 19, 11, 8, 5, 7, 15, 17, 3, 2, 1, 8, 31, 21, 2, 19, 3, 37, 34},
{20, 72, 74, 17, 13, 42, 4, 9, 16, 5, 14, 9, 4, 3, 1, 16, 5, 14, 10, 32, 4, 22, 18},
{20, 74, 100, 33, 41, 13, 12, 8, 4, 11, 9, 25, 1, 15, 14, 2, 7, 8, 5, 3, 9, 40, 34},
{20, 74, 105, 30, 44, 17, 13, 4, 5, 4, 3, 16, 25, 20, 1, 7, 6, 13, 7, 9, 38, 2, 36},
{20, 79, 96, 30, 19, 30, 8, 11, 3, 5, 24, 9, 2, 10, 29, 7, 15, 1, 11, 3, 8, 42, 37},
{20, 85, 112, 25, 23, 37, 9, 14, 18, 7, 11, 5, 6, 16, 34, 25, 10, 15, 11, 4, 7, 44, 41},
{20, 88, 92, 20, 16, 23, 29, 4, 12, 24, 5, 6, 12, 16, 1, 7, 6, 23, 1, 17, 8, 48, 40},
{21, 44, 68, 16, 12, 16, 4, 8, 20, 4, 12, 12, 4, 8, 11, 5, 13, 7, 1, 7, 6, 6, 25, 19},
{21, 71, 90, 25, 16, 30, 9, 7, 2, 5, 31, 5, 2, 3, 6, 1, 1, 6, 23, 5, 17, 3, 37, 34},
{21, 73, 80, 21, 12, 16, 24, 8, 4, 3, 5, 12, 1, 2, 1, 8, 22, 7, 4, 20, 15, 16, 37, 36},
{21, 79, 87, 22, 15, 19, 23, 7, 8, 5, 10, 4, 29, 7, 1, 6, 21, 6, 1, 15, 14, 7, 43, 36},
{21, 83, 112, 26, 22, 35, 9, 13, 17, 9, 5, 4, 8, 1, 1, 14, 37, 7, 26, 6, 20, 43, 3, 40},
{22, 62, 98, 27, 35, 16, 11, 3, 15, 17, 14, 9, 7, 2, 5, 13, 2, 11, 3, 11, 19, 8, 35, 8,
  27}, {20, 62, 85, 24, 38, 14, 10, 6, 4, 12, 2, 2, 12, 8, 20, 10, 3, 5, 1, 2, 35, 7, 27},
{20, 68, 75, 22, 17, 29, 5, 12, 11, 9, 7, 2, 46, 2, 9, 6, 7, 5, 1, 4, 13, 9, 22},
{19, 35, 53, 8, 11, 16, 5, 3, 2, 4, 3, 5, 7, 1, 2, 5, 4, 19, 16, 1, 18, 17},
{19, 50, 52, 14, 11, 25, 4, 7, 7, 6, 1, 5, 2, 5, 1, 9, 3, 8, 6, 2, 27, 23},
{19, 50, 54, 11, 13, 26, 6, 5, 3, 10, 1, 7, 7, 1, 9, 4, 3, 8, 1, 28, 5, 22},
{19, 54, 59, 11, 8, 7, 28, 2, 5, 3, 4, 1, 3, 13, 1, 13, 12, 1, 11, 3, 31, 23},
{19, 55, 62, 12, 13, 30, 6, 5, 1, 4, 10, 1, 8, 7, 3, 7, 14, 1, 4, 9, 32, 23},
{19, 56, 57, 12, 9, 11, 24, 3, 4, 2, 13, 9, 5, 1, 5, 4, 1, 6, 13, 10, 33, 23},

```

```

{19, 57, 60, 15, 13, 29, 2, 6, 5, 9, 8, 1, 4, 4, 3, 7, 1, 11, 10, 5, 31, 26},
{19, 57, 95, 22, 35, 9, 13, 5, 4, 2, 5, 17, 28, 4, 1, 3, 12, 18, 11, 7, 32, 25},
{19, 58, 58, 8, 7, 15, 28, 1, 6, 9, 4, 2, 8, 9, 13, 7, 1, 6, 4, 2, 30, 28},
{19, 62, 62, 10, 9, 14, 29, 1, 8, 11, 3, 11, 4, 7, 12, 3, 9, 1, 8, 4, 33, 29},
{19, 64, 65, 14, 8, 10, 32, 6, 2, 12, 20, 5, 7, 3, 2, 1, 5, 3, 4, 2, 33, 31},
{19, 65, 67, 9, 4, 3, 5, 14, 30, 1, 2, 5, 7, 11, 3, 8, 2, 16, 19, 9, 37, 28},
{19, 66, 74, 12, 19, 35, 5, 7, 3, 2, 1, 5, 6, 16, 4, 8, 1, 7, 15, 12, 39, 27},
{19, 66, 100, 27, 39, 7, 8, 12, 6, 1, 5, 4, 12, 17, 26, 11, 18, 5, 13, 9, 35, 31},
{19, 67, 101, 27, 40, 17, 10, 7, 3, 4, 14, 25, 11, 7, 10, 4, 3, 16, 11, 15, 36, 31},
{19, 67, 104, 28, 39, 17, 11, 7, 15, 28, 16, 1, 8, 10, 13, 13, 3, 10, 3, 7, 37, 30},
{19, 69, 72, 13, 9, 14, 33, 4, 5, 17, 19, 12, 5, 4, 9, 39, 3, 2, 1, 5, 4, 30},
{19, 69, 72, 17, 19, 33, 11, 6, 5, 14, 5, 1, 6, 14, 2, 5, 3, 2, 9, 39, 7, 30},
{19, 69, 72, 17, 20, 32, 11, 6, 4, 9, 7, 5, 1, 5, 2, 5, 15, 1, 14, 3, 40, 29},
{19, 70, 78, 13, 20, 37, 8, 5, 3, 2, 12, 10, 11, 3, 7, 17, 5, 1, 4, 12, 41, 29},
{19, 71, 104, 30, 41, 21, 9, 7, 2, 5, 12, 26, 5, 7, 19, 7, 5, 14, 12, 3, 37, 34},
{19, 72, 73, 21, 18, 33, 4, 6, 8, 20, 1, 3, 2, 1, 5, 2, 4, 3, 7, 12, 40, 32},
{19, 72, 77, 13, 11, 12, 36, 2, 5, 4, 3, 9, 12, 3, 1, 6, 9, 15, 21, 10, 41, 31},
{19, 72, 78, 17, 19, 36, 15, 2, 10, 11, 3, 5, 2, 1, 4, 6, 3, 16, 2, 14, 42, 30},
{19, 72, 80, 14, 20, 38, 9, 5, 4, 1, 3, 18, 16, 2, 12, 42, 11, 4, 1, 3, 7, 30},
{19, 72, 81, 17, 18, 37, 16, 1, 19, 7, 9, 5, 7, 44, 5, 2, 3, 11, 2, 9, 8, 28},
{19, 74, 79, 17, 19, 38, 13, 4, 2, 8, 9, 6, 3, 10, 1, 10, 16, 9, 1, 8, 41, 33},
{19, 74, 113, 30, 44, 21, 9, 4, 5, 3, 1, 2, 7, 12, 29, 5, 28, 5, 17, 6, 40, 34},
{19, 74, 115, 30, 44, 16, 14, 2, 7, 19, 30, 13, 5, 12, 9, 4, 5, 19, 11, 14, 41, 33},
{19, 75, 109, 19, 8, 7, 13, 28, 1, 6, 9, 4, 15, 2, 11, 21, 12, 42, 33, 3, 39, 36},
{19, 75, 110, 20, 12, 14, 29, 7, 3, 2, 1, 15, 4, 1, 10, 21, 12, 42, 33, 3, 39, 36},
{19, 76, 84, 21, 19, 36, 2, 17, 11, 12, 8, 3, 2, 7, 3, 5, 8, 48, 16, 4, 12, 28},
{19, 77, 82, 14, 10, 16, 37, 4, 6, 8, 7, 3, 1, 21, 4, 1, 10, 9, 19, 13, 45, 32},
{19, 79, 80, 15, 17, 13, 34, 4, 9, 13, 2, 11, 7, 5, 2, 12, 9, 19, 5, 14, 46, 33},
{19, 79, 83, 22, 10, 8, 39, 2, 6, 5, 3, 4, 2, 1, 11, 7, 26, 3, 14, 9, 44, 35},
{19, 79, 88, 21, 18, 40, 8, 10, 16, 5, 11, 2, 12, 20, 4, 3, 1, 6, 48, 5, 11, 31},
{19, 79, 115, 35, 44, 26, 9, 22, 31, 15, 7, 4, 3, 1, 4, 10, 9, 8, 2, 6, 40, 39},
{19, 79, 115, 36, 43, 16, 20, 13, 30, 12, 4, 8, 12, 17, 14, 6, 2, 10, 8, 5, 42, 37},
{19, 80, 85, 24, 20, 36, 4, 16, 13, 15, 3, 49, 8, 5, 3, 15, 3, 5, 9, 2, 7, 31},
{19, 82, 83, 17, 12, 19, 34, 5, 7, 9, 13, 11, 15, 5, 4, 1, 7, 20, 6, 49, 13, 33},
{19, 82, 83, 23, 18, 41, 5, 13, 20, 8, 12, 4, 5, 3, 1, 2, 4, 5, 3, 1, 42, 40},
{19, 83, 85, 13, 14, 20, 36, 8, 5, 4, 10, 3, 6, 4, 16, 11, 8, 12, 19, 15, 49, 34},
{19, 83, 85, 20, 9, 13, 41, 5, 4, 1, 16, 6, 26, 9, 7, 2, 5, 8, 3, 5, 44, 39},
{19, 84, 87, 13, 18, 15, 38, 8, 5, 3, 12, 3, 14, 9, 11, 10, 11, 20, 5, 15, 49, 35},
{19, 84, 89, 23, 21, 40, 2, 19, 12, 13, 9, 3, 2, 7, 4, 5, 14, 49, 1, 11, 10, 35},
{19, 85, 92, 18, 8, 6, 10, 43, 2, 4, 10, 14, 15, 7, 6, 1, 19, 8, 23, 13, 49, 36},
{19, 86, 89, 22, 25, 39, 15, 7, 4, 7, 14, 8, 3, 10, 16, 7, 3, 50, 2, 11, 9, 36},
{19, 87, 96, 11, 12, 20, 44, 6, 5, 4, 8, 1, 8, 7, 4, 24, 19, 18, 1, 17, 52, 35},
{19, 88, 97, 18, 25, 45, 11, 7, 4, 17, 11, 15, 6, 5, 1, 4, 2, 19, 3, 17, 52, 36},
{19, 89, 91, 13, 11, 9, 16, 40, 2, 7, 2, 7, 4, 15, 3, 1, 24, 10, 25, 13, 51, 38},
{19, 90, 103, 13, 10, 17, 50, 3, 7, 12, 4, 8, 20, 20, 7, 13, 1, 6, 21, 16, 53, 37},
{19, 92, 96, 22, 27, 43, 14, 8, 3, 8, 16, 6, 5, 1, 12, 21, 6, 53, 10, 2, 8, 39},
{19, 92, 98, 26, 21, 45, 5, 16, 7, 5, 8, 11, 2, 3, 9, 8, 3, 22, 8, 17, 53, 39},
{19, 94, 100, 14, 13, 23, 44, 1, 12, 15, 2, 21, 4, 10, 13, 6, 7, 9, 20, 18, 56, 38},
{19, 94, 100, 14, 15, 21, 44, 13, 1, 10, 6, 4, 23, 2, 12, 15, 5, 7, 20, 18, 56, 38},
{19, 94, 100, 24, 22, 48, 2, 20, 15, 11, 4, 7, 19, 16, 5, 6, 4, 1, 3, 52, 7, 42},

```

```

{19, 94, 101, 25, 20, 49, 5, 15, 16, 14, 4, 11, 2, 9, 7, 18, 2, 13, 3, 11, 52, 42},
{19, 96, 99, 23, 28, 45, 14, 9, 11, 17, 5, 4, 1, 3, 20, 8, 6, 2, 12, 54, 10, 42},
{20, 44, 50, 11, 9, 24, 2, 7, 7, 6, 1, 6, 2, 5, 6, 1, 3, 2, 10, 2, 8, 26, 18},
{20, 49, 54, 10, 14, 25, 6, 4, 2, 5, 11, 5, 3, 2, 6, 7, 4, 9, 29, 6, 1, 5, 20},
{20, 53, 57, 15, 12, 26, 3, 9, 11, 7, 1, 3, 5, 6, 2, 5, 9, 2, 31, 7, 1, 6, 22},
{20, 54, 80, 25, 29, 14, 7, 4, 3, 7, 23, 6, 4, 2, 9, 1, 7, 15, 9, 7, 2, 28, 26},
{20, 57, 72, 21, 11, 25, 6, 5, 1, 4, 4, 3, 2, 5, 20, 4, 1, 3, 16, 21, 31, 5, 26},
{20, 59, 62, 9, 10, 11, 29, 8, 1, 7, 3, 1, 2, 3, 7, 4, 1, 4, 19, 11, 7, 33, 26},
{20, 59, 62, 9, 10, 11, 29, 8, 1, 7, 4, 4, 7, 3, 1, 2, 3, 19, 1, 11, 7, 33, 26},
{20, 62, 66, 9, 5, 6, 10, 32, 4, 1, 3, 4, 16, 14, 1, 5, 8, 13, 4, 9, 6, 34, 28},
{20, 65, 74, 16, 15, 34, 4, 11, 13, 3, 7, 10, 8, 8, 5, 3, 2, 2, 40, 1, 13, 12, 25},
{20, 67, 69, 8, 10, 18, 31, 6, 2, 4, 8, 10, 6, 9, 5, 6, 4, 1, 16, 7, 13, 38, 29},
{20, 68, 68, 13, 7, 8, 12, 28, 6, 1, 5, 4, 16, 11, 6, 7, 5, 1, 8, 16, 12, 40, 28},
{20, 68, 73, 19, 13, 36, 6, 7, 11, 10, 4, 3, 4, 6, 1, 5, 1, 13, 7, 12, 6, 37, 31},
{20, 70, 70, 10, 6, 8, 17, 29, 4, 2, 10, 14, 5, 12, 6, 4, 2, 7, 17, 5, 12, 41, 29},
{20, 71, 71, 15, 12, 14, 30, 3, 7, 2, 16, 14, 4, 11, 12, 2, 1, 4, 11, 41, 3, 7, 30},
{20, 72, 72, 15, 11, 16, 30, 4, 7, 16, 3, 2, 14, 12, 2, 12, 42, 11, 4, 1, 3, 7, 30},
{20, 72, 72, 17, 10, 12, 33, 7, 3, 1, 11, 4, 22, 6, 7, 10, 4, 3, 1, 6, 39, 5, 33},
{20, 73, 110, 30, 43, 17, 13, 10, 17, 29, 11, 6, 5, 4, 7, 1, 3, 17, 15, 12, 3, 38, 35},
{20, 74, 74, 17, 10, 13, 34, 7, 3, 5, 11, 23, 1, 6, 7, 10, 4, 3, 1, 6, 40, 5, 34},
{20, 74, 74, 18, 12, 10, 34, 3, 7, 6, 5, 1, 4, 1, 4, 11, 22, 3, 7, 12, 6, 40, 34},
{20, 77, 80, 21, 22, 34, 13, 8, 10, 12, 5, 3, 5, 8, 15, 3, 46, 5, 3, 2, 9, 7, 31},
{20, 78, 78, 24, 17, 37, 5, 12, 2, 3, 17, 8, 1, 4, 3, 5, 8, 9, 2, 7, 4, 41, 37},
{20, 79, 116, 37, 42, 23, 14, 9, 33, 8, 15, 1, 7, 18, 6, 12, 7, 9, 5, 2, 3, 41, 38},
{20, 81, 81, 24, 20, 37, 4, 7, 9, 20, 8, 5, 2, 3, 8, 12, 4, 3, 1, 2, 44, 5, 37},
{20, 81, 87, 20, 23, 38, 8, 12, 8, 15, 5, 3, 2, 1, 1, 7, 8, 6, 7, 17, 49, 15, 32},
{20, 84, 91, 16, 23, 45, 9, 7, 2, 7, 8, 13, 11, 6, 1, 9, 17, 4, 9, 13, 8, 46, 38},
{20, 84, 91, 17, 10, 13, 44, 7, 3, 4, 12, 13, 7, 8, 6, 1, 5, 16, 24, 13, 3, 47, 37},
{20, 84, 91, 23, 16, 45, 7, 9, 8, 7, 13, 2, 11, 1, 6, 9, 4, 17, 9, 13, 8, 46, 38},
{20, 86, 89, 14, 17, 18, 37, 11, 3, 8, 11, 1, 19, 14, 5, 2, 9, 7, 2, 18, 52, 16, 34},
{20, 88, 99, 19, 22, 47, 16, 3, 25, 9, 7, 2, 5, 8, 3, 5, 7, 16, 52, 11, 2, 9, 36},
{20, 88, 100, 17, 23, 48, 11, 6, 8, 21, 8, 3, 5, 6, 12, 1, 7, 4, 20, 4, 16, 52, 36},
{20, 90, 94, 24, 22, 44, 7, 15, 13, 6, 5, 1, 11, 7, 17, 3, 8, 7, 14, 1, 50, 9, 40},
{20, 92, 95, 13, 17, 22, 40, 9, 4, 5, 11, 5, 14, 9, 18, 8, 3, 12, 22, 3, 55, 15, 37},
{20, 93, 100, 25, 21, 47, 4, 17, 16, 13, 3, 10, 8, 9, 19, 2, 5, 1, 4, 53, 12, 9, 40},
{20, 93, 100, 25, 23, 45, 2, 9, 12, 16, 11, 4, 5, 2, 10, 5, 9, 1, 8, 21, 17, 55, 38},
{21, 31, 44, 14, 17, 7, 4, 3, 1, 3, 5, 11, 3, 2, 3, 2, 8, 2, 1, 6, 6, 1, 16, 15},
{21, 37, 40, 7, 5, 7, 18, 2, 3, 8, 1, 1, 6, 5, 2, 4, 5, 10, 3, 1, 2, 22, 5, 15},
{21, 45, 72, 20, 25, 8, 5, 7, 3, 2, 2, 23, 1, 10, 12, 3, 7, 11, 4, 7, 4, 3, 24, 21},
{21, 47, 67, 21, 26, 10, 6, 5, 1, 4, 9, 17, 4, 3, 2, 5, 13, 1, 3, 9, 8, 1, 24, 23},
{21, 63, 68, 20, 13, 30, 5, 8, 2, 3, 10, 7, 4, 1, 3, 9, 7, 3, 4, 13, 1, 38, 12, 25},
{21, 64, 100, 28, 36, 13, 7, 8, 6, 1, 5, 12, 28, 11, 6, 7, 5, 1, 4, 16, 20, 8, 36, 28},
{21, 68, 100, 19, 21, 28, 17, 2, 7, 4, 5, 7, 3, 1, 4, 2, 8, 2, 37, 6, 31, 2, 35, 33},
{21, 69, 75, 18, 16, 35, 2, 14, 7, 6, 7, 1, 4, 1, 8, 3, 5, 5, 2, 16, 5, 13, 40, 29},
{21, 72, 77, 20, 19, 33, 1, 4, 14, 14, 4, 3, 1, 6, 5, 4, 7, 1, 3, 3, 44, 15, 13, 28},
{21, 80, 85, 16, 9, 7, 9, 39, 5, 2, 6, 3, 11, 8, 1, 5, 13, 4, 9, 19, 22, 12, 46, 34},
{19, 51, 73, 21, 30, 14, 7, 5, 2, 3, 11, 18, 2, 6, 12, 4, 8, 2, 6, 7, 26, 25},
{19, 51, 99, 21, 30, 10, 6, 5, 1, 4, 4, 3, 1, 16, 20, 15, 27, 4, 24, 26, 1, 25},
{19, 67, 94, 32, 35, 29, 3, 15, 11, 12, 4, 6, 1, 13, 7, 10, 2, 8, 4, 3, 34, 33},
{19, 70, 98, 29, 41, 18, 11, 10, 1, 7, 12, 23, 15, 3, 2, 5, 12, 3, 9, 11, 36, 34},

```

```

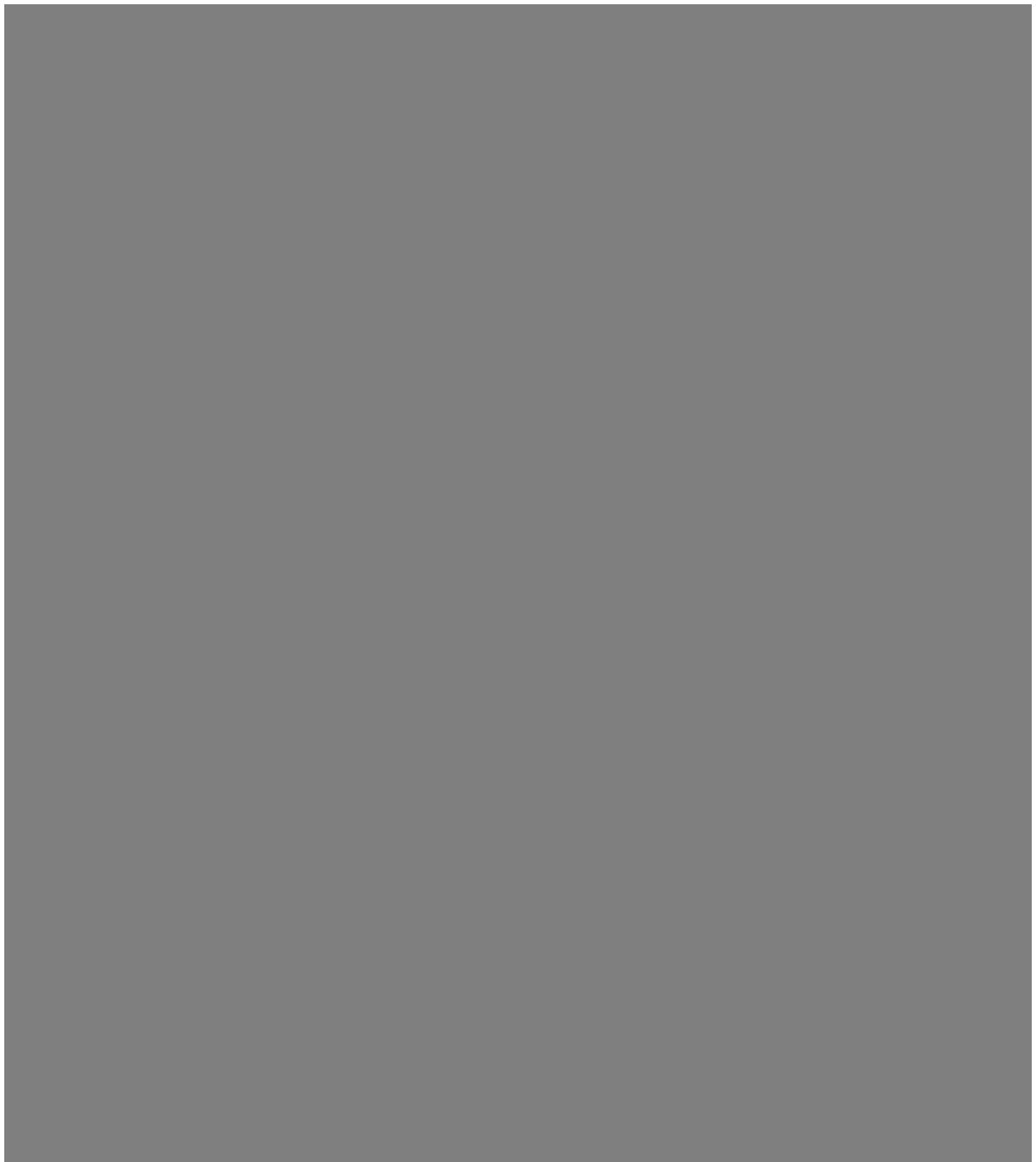
{19, 71, 94, 32, 39, 25, 7, 8, 6, 11, 21, 2, 4, 10, 3, 1, 2, 10, 5, 37, 3, 34},
{19, 72, 101, 18, 13, 41, 5, 8, 20, 3, 11, 6, 5, 1, 4, 24, 3, 21, 27, 39, 6, 33},
{19, 75, 110, 34, 41, 9, 10, 15, 8, 33, 8, 1, 7, 4, 3, 1, 2, 22, 20, 39, 3, 36},
{19, 86, 113, 39, 47, 27, 7, 5, 2, 3, 9, 8, 15, 27, 11, 6, 5, 1, 4, 12, 47, 39},
{20, 51, 74, 18, 33, 8, 10, 6, 2, 5, 7, 5, 1, 4, 2, 2, 13, 18, 11, 9, 28, 5, 23},
{20, 56, 111, 23, 33, 10, 13, 7, 3, 3, 30, 4, 15, 11, 14, 12, 2, 18, 22, 16, 30, 4, 26},
{20, 59, 114, 28, 31, 25, 3, 12, 10, 12, 2, 6, 2, 10, 4, 14, 10, 31, 4, 28, 30, 1, 29},
{20, 62, 96, 24, 38, 14, 10, 4, 6, 11, 7, 3, 7, 28, 5, 1, 4, 4, 19, 15, 32, 2, 30},
{20, 86, 99, 27, 22, 37, 5, 6, 11, 23, 8, 1, 7, 7, 4, 15, 3, 13, 25, 10, 49, 12, 37},
{21, 37, 53, 15, 22, 8, 7, 1, 7, 8, 13, 5, 4, 1, 3, 6, 1, 5, 1, 4, 4, 5, 19, 18},
{21, 49, 72, 20, 29, 5, 6, 9, 4, 1, 3, 4, 5, 2, 1, 17, 20, 1, 4, 3, 12, 26, 3, 23},
{21, 88, 108, 27, 21, 40, 6, 15, 13, 6, 5, 9, 1, 4, 7, 24, 4, 20, 16, 28, 4, 12, 48, 40},
{22, 80, 100, 24, 20, 36, 4, 16, 13, 7, 8, 6, 1, 5, 4, 1, 7, 20, 28, 19, 6, 13, 44,
  8, 36}, {19, 54, 64, 20, 34, 11, 9, 2, 4, 3, 9, 4, 1, 2, 2, 3, 6, 30, 5, 1, 4, 24},
{19, 58, 73, 20, 38, 4, 3, 5, 8, 1, 2, 5, 4, 3, 1, 10, 10, 1, 12, 35, 11, 23},
{19, 65, 77, 26, 39, 7, 6, 13, 1, 5, 8, 3, 2, 1, 4, 11, 38, 1, 3, 9, 7, 27},
{19, 71, 120, 32, 39, 15, 10, 7, 3, 43, 5, 8, 12, 5, 3, 2, 9, 7, 28, 5, 38, 33},
{19, 75, 93, 26, 49, 12, 14, 10, 2, 7, 9, 5, 2, 6, 4, 3, 13, 44, 2, 10, 8, 31},
{19, 77, 88, 31, 46, 9, 5, 6, 11, 4, 1, 7, 13, 2, 5, 4, 9, 1, 7, 42, 6, 35},
{19, 78, 95, 28, 50, 15, 13, 2, 6, 5, 9, 8, 1, 4, 4, 3, 12, 45, 1, 11, 10, 33},
{19, 80, 102, 25, 55, 13, 12, 1, 11, 14, 4, 7, 8, 7, 3, 4, 14, 47, 1, 10, 9, 33},
{19, 88, 104, 33, 55, 9, 10, 6, 8, 4, 2, 10, 8, 1, 7, 8, 15, 14, 4, 10, 49, 39},
{19, 89, 101, 35, 54, 11, 9, 15, 2, 7, 13, 1, 9, 5, 8, 2, 5, 47, 4, 1, 3, 42},
{19, 91, 99, 16, 25, 50, 7, 4, 5, 3, 1, 2, 4, 12, 10, 19, 22, 13, 6, 7, 49, 42},
{20, 41, 49, 9, 7, 25, 2, 5, 6, 5, 2, 3, 1, 5, 1, 7, 4, 3, 6, 10, 7, 24, 17},
{20, 69, 84, 26, 43, 12, 14, 7, 3, 2, 1, 7, 5, 3, 4, 5, 41, 11, 2, 3, 9, 8, 28},
{20, 73, 88, 25, 48, 14, 11, 3, 8, 9, 8, 3, 5, 3, 8, 7, 2, 1, 7, 40, 6, 5, 33},
{20, 75, 93, 27, 48, 13, 14, 12, 1, 9, 6, 5, 1, 4, 45, 2, 5, 2, 11, 3, 11, 8, 30},
{20, 84, 103, 32, 52, 13, 9, 10, 8, 1, 11, 9, 4, 5, 3, 4, 2, 1, 1, 51, 17, 16, 33},
{21, 77, 90, 31, 46, 12, 7, 12, 3, 4, 2, 1, 5, 14, 4, 3, 5, 1, 2, 2, 44, 10, 9, 33}};

```

```

Manipulate[
  Switch[displaymode,
    1, ShowPuzzle[smallrec[[pick]]],
    2, ShowMondrian[smallrec[[pick]], False, True],
    3, ShowMondrian[smallrec[[pick]], coloring, False],
    4, ShowQuilt[smallrec[[pick]], coloring]],
  {{pick, 934, "pick a dissection"}, 1, Length[smallrec], 1, Appearance → "Labeled"},
  {{displaymode, 3, "display mode"}, {1 → "Mondrian sums ", 2 → "Mondrian algebra ",
    3 → "Mondrian solution ", 4 → "solution as squares "}},
  {{coloring, True, "colored solutions"},
    {False → "no coloring ", True → "use colors "}},
  SaveDefinitions → True, AutorunSequencing → {{1, 15}, {2, 5}, {3, 2}}]

```



CAPTION

DETAILS

THIS NOTEBOOK IS THE SOURCE CODE FROM

Ed Pegg Jr

"Mondrian Puzzles"

<http://demonstrations.wolfram.com/MondrianPuzzles/>

Wolfram Demonstrations Project

Published: July 8, 2010

A full-function Wolfram *Mathematica* system is required to edit this notebook.

[GET WOLFRAM MATHEMATICA »](#)