

Convergence measure of sketched engineering drawings

R. Plumed, P. Company, A. Piquer and P.A.C. Varley

Department of Mechanical Engineering and Construction, Universitat Jaume I, Spain

Abstract

This Technical Note describes the analysis from a pilot experiment carried out to determine whether design engineers commonly use convergence of parallel lines to a vanishing point when sketching new shapes, rather than draw physically parallel lines as parallel.

Index Terms: Sketches-based modeling. Parallel projection. Central projection. Vanishing points.

1. Introduction

Parallel lines are a particularly important cue, and they have two common graphical representations in pictorial projections which have survived the test of time. One, *central projection* is the convergence to one or more vanishing points of lines representing parallel lines in 3D space. The alternative, *axonometric projection*, does not use vanishing points—convergence of parallel lines is deliberately absent. A third representation, *oblique projection*, also deliberately avoids the use of vanishing points, and in this paper oblique sketches are generally grouped with axonometric sketches.

Clearly, each representation has advantages and disadvantages, and engineers and designers must be trained to use both. However, which representation they prefer for any particular task has not been fully investigated. As far as we know, determining whether engineers and designers commonly use convergence of parallel lines while sketching new shapes is still an unresolved question.

In fact, previous studies have in general either assumed or ignored convergence as one of their simplifying assumptions ([1], [2], [3], [4], [5]...).

For that reason, this technical report describes a pilot experiment carried out to determine the presence and importance of vanishing points in sketches produced by engineers and designers.

2. Definition of terms

A *sketch* is a graphical representation, made by hand, which portrays an *object*. A sketch may include shading, repeated lines for emphasis, and any other embellishments which help to convey the “flavour” of the object. We distinguish between (a) *natural sketches*, which show only the part of the portrayed object visible from the chosen view-

point, and (b) *wireframe sketches*, which show all edges of the portrayed object, visible or not.

Cues (sometimes *clues* or *regularities*) are common features of sketches which suggest corresponding properties of the object.

Views are two dimensional representations of three dimensional objects in which there is a formal correspondence (often one-to-one) between parts of the view and parts of the object. There are several different kinds of views. Here, we only consider *line-drawing* views, in which only edges and contours are drawn.

Line-drawing views can be subdivided into *degenerate views*, where the direction of view is aligned with one of the features of the object (usually one of its major axes), and *general views*, where the direction of view is not aligned with any feature of the object.

Degenerate views (sometimes called *orthographic views*) display two dimensions of the objects and omit the third dimension. They can be used singly or as part of a *multiview system* which combines several different views to display the three dimensions of the object.

General views (or *pictorial drawings*) are used to display simultaneously the three main directions of the objects. The important distinction here is between *parallel projections* and *central projections*. In parallel projections, lines which are parallel in 3D space are projected as parallel in 2D, it includes *axonometric projection* and *oblique projection*. Axonometric projection is produced by parallel lines of sight perpendicular to the plane of projection, while in oblique projection parallel lines of sight are oblique to the plane of projection.

On the other hand, in central projections parallel lines are drawn converging towards one or more vanishing points (this latter technique is known as *linear perspective*).

A *polyhedron* is a solid object of which all of the faces are planar. A polyhedron is a *normalon* if all of its edges and face normals are aligned with one of three mutually

orthogonal axes, or a *quasi-normalon* if all of its vertices terminate at least one edge aligned with one of the three mutually orthogonal axes.

Scaffolding is any line or group of auxiliary lines in the sketch which is used to facilitate drawing and which does not correspond to any feature of the object.

For the purposes of our experiment, a *product designer* is someone who has received specific training in 2D and 3D geometry and the commonly-used techniques for representing 3D objects in 2D as part of a technical education.

We contrast product designers with *graphic designers*, who have received training in the commonly-used techniques for representing 3D objects in 2D as part of a non-technical (often artistic) education.

3. Design of the experiment

The purpose of our experiment is to determine to what extent convergence to a vanishing point is used by designers while sketching engineering shapes.

In this section, we describe the experiment which we designed to test our hypothesis.

The basis of our experiment is that we asked various people to draw pictures of three polyhedral solids. The solids and the accompanying instructions are described in detail in Section 3.1, and the participants in the study are described in detail in Section 3.2.

To determine the human perception of such drawings, the pictures were subjectively classified by a group of experts as central/axonometric projections and good/poor quality. The classification results are summarised in Section 3.3.

3.1. The questionnaire

In designing our experiment, it is important to avoid any kind of implicit or explicit constraint or guidance on the way the task should be performed. In particular, we tried not to influence the participants either to use or not to use hidden lines, and left them free to choose the orientation of the model.

For this purpose, we produced a minimal questionnaire which avoided as far as possible any unnecessary guidance to the participants. Since a verbal task description could implicitly suggest some restrictions in the sketch process, the task description in the questionnaire took the form of a visual worked example: a photograph of a physical object and its representation as a freehand drawing.

Expanded polystyrene was chosen for the model material as surface brightness helps the observer to recognise the object's faces and edges, thereby ensuring that all participants had a good mental model of the object they were to sketch.

To avoid any hint of how parallel edges should be represented, or whether or not hidden lines should be drawn, the physical object in the worked example was a tetrahedron (which, obviously, contains no parallel lines) oriented such that all of its edges were visible. Figure 2 shows a copy of the questionnaire.

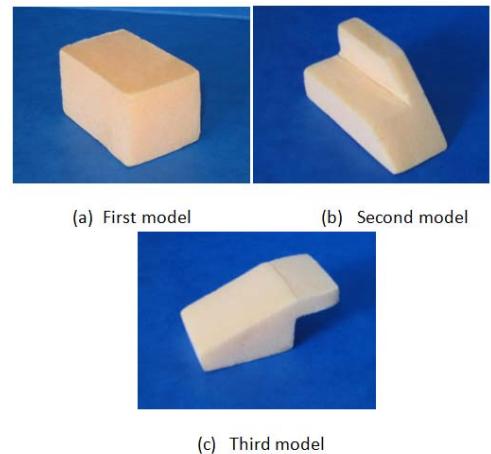


Figure 1. Models used in the experiment, by rising order of difficulty: (a), (b) and (c).

Even this minimal task description contains one implicit hint: the participants are influenced to use pictorial projection, not multiview orthographic projections.

The questionnaire also included a 15 x 11 cm rectangular frame for the participants to draw their own objects. This helped to ensure that sketches were of a similar size.

As part of the experimental process, we also collected personal data about the individual participants. These data did not compromise the participants' anonymity, and the answers could be useful in the analysis stage, allowing us to correlate the results with other data as studies level, studies field, sex and age.

In the illustrative example (below right), you can see a freehand sketch of a tetrahedron, a model of which is shown in the photograph (below left).




Sketch in the frame below a freehand representation of the physical model you have been given, taking care that:

- You should show the most important details of the model.
- You should arrange the model in whatever position you consider to be most appropriate.
- You should ignore material imperfections of the model.

Figure 2. Questionnaire model

3.2. Participants

The bulk of the population was drawn from several departments of the same university, and included industrial engineers, mechanical engineers, architects, designers and artists. The level of experience ranged from undergraduate students to professors. We also included a few participants with no technical drawing training.

A total of 147 questionnaires were returned.

- 16 (10.88%) were returned by participants with no university education. 2 of them (12.5%) were filled out by people with secondary education until 16 years old. 3 of them (18.75%) were solved by people with secondary education between 16 and 18 years old. And others 11 (68.75%) had received secondary education with professional orientation. Their ages ranged from 27 to 66 years old. 11 were male (68.75%) and 5 were female (31.25%).
- 73 questionnaires (49.66%) were returned by university students, of whom 58 (79.45%) studied an engineering speciality (mechanical, industrial), 7 (9.59%) studied architecture, and 8 (10.96%) studied other subjects. Their ages ranged from 18 and 43 years old. 53 were male (72.6%) and 20 were female (27.4%).
- 58 questionnaires (39.46%) were returned by participants with one or more university degree. 29 (50%) graduated in engineering, 14 (24.14%) graduated in architecture, 8 (13.79%) had artistic training via design studies or BBAA, and 7 (12.07%) graduated in other fields. Their ages ranged from 26 to 56 years old. 35 were male (60.34%) and 23 were female (39.66%).

3.3. Human perception

In order to determine how humans would classify the sketches, each sketch was subjectively classified by six experts (four belonging to the research team and two external experts) as: clearly axonometric; clearly central; clearly non-pictorial orthographic; uncertain; and not classifiable because of poor quality.

Next, we compared the experts' classifications, and discarded those drawings where there was disagreement (*agreement* means here that four or more experts chose the same classification). As a result, 20 (13.6%) of the original 147 drawings were discarded.

We also discarded 9 sketches which were considered by all six experts as so poor quality that trying to classify their contents as central or parallel projections was pointless.

Finally, we discarded 7 sketches which were agreed as drawn using non-pictorial orthographic projections, as, showing only a single 2D view, these were not useful when determining how 3D objects are represented pictorially.

After discarding useless sketches, we were left with 111 valid sketches. Of these, 3 (2.54%) clearly used central projection and 108 (91.53%) clearly used axonometric projection. All 3 of those which used central projection depicted the first model (the cuboid).

In more detail:

- 71 of the valid sketches (63.96%) were created by product designers (graduated and undergraduate students from engineering studies). All of these were classified as axonometric drawings by experts.
- 26 of the valid sketches (23.42%) were created by graphic designers (graduated and undergraduate students of architecture, design and artistic studies). These included the 3 were classified by experts as perspective drawings.
- 14 of the valid sketches (12.61%) were produced by subjects without drawing training.

From these results, we find strong support for the hypothesis that designers (both product designers and graphic designers) prefer axonometric to perspective projection. There is only weak support for the hypothesis that graphic designers are more likely than product designers to use perspective projection, and there is also only weak support for the hypothesis that model complexity influences choice of representation, with perspective projection being more likely for simple objects than for complex objects.

3.4. Numerical Measurements

In order to preserve the questionnaires, the sketched images were scanned and saved as bitmaps. This has the additional advantage that it allows us to perform numerical analyses. This numerical data could be used to calibrate automatic classification of sketches into central/axonometric, as a step towards our aim of automating interpretation of engineering sketches. This data can be found as annexes in the present work.

In order to produce this numerical data, we manually vectorised the scanned images into line drawings, by identifying vertex locations and tracing new lines from vertex to vertex, as described next.

In most cases, vertex locations are clearly defined as junctions of two or more line segments, as shown in Figure 3.

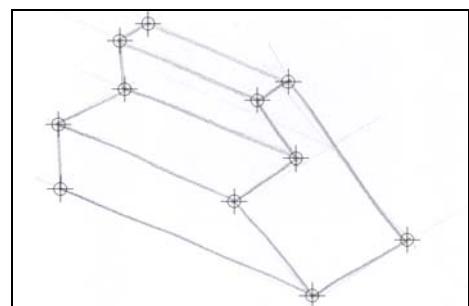


Figure 3. Vertices defined by points intersection

However, there were also cases in which vertex locations were not so well defined:

- Overtracing, as in Figure 4, results in several intersection points among several lines. In these cases, we defined the vertex location as the intersection of medial axes.

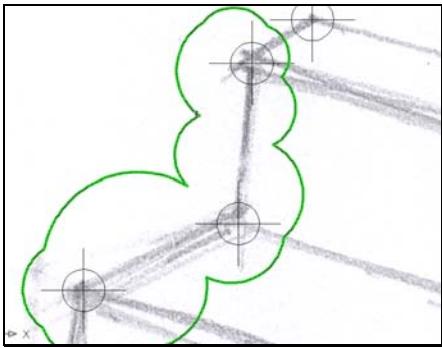


Figure 4. Vertices at middle of overtracing lines

- Sometimes, as in Figure 5, junctions of lines which were intended to intersect at the same vertex were sufficiently separated to be considered as distinct vertices. In our processing, we merged any two vertex locations which differed by less than 3.5% of the length of the shortest line segment intersecting either vertex.

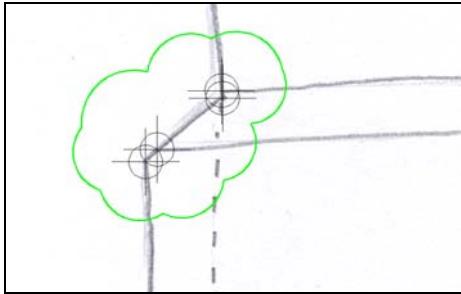


Figure 5. Definition of different vertices

- Finally, some participants used scaffolding lines intermixed with pictorial lines, as in Figure 6. We assumed that thick lines are pictorial lines and thin lines are scaffolding, and vertex locations only occur at the intersections of pictorial lines.

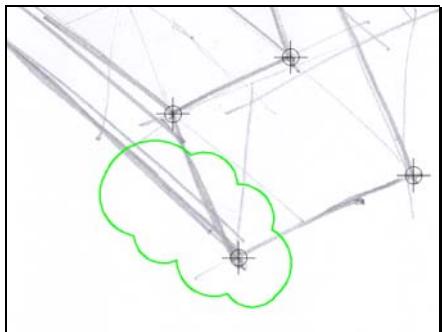


Figure 6. Vertex definition among main lines

Once all vertex locations were defined, we redrew pictorial lines in different colours, where each colour corresponds to a different direction (see Figure 7).

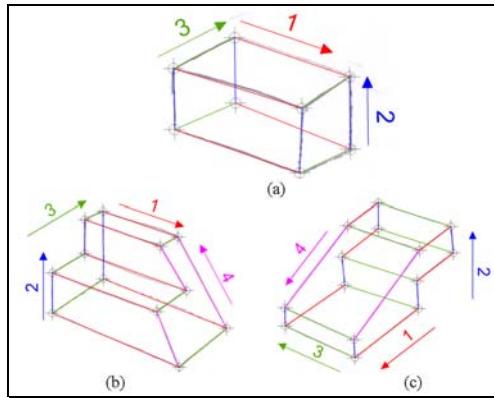


Figure 7. Line drawings

In order to facilitate later analysis, lines representing the same edges of each model were always drawn in the same colour.

Hidden lines were also vectorised, since they portray edges of the model, but other auxiliary lines (such as reference axes and scaffolding) were discarded.

From each vectorised line drawing we extracted: (a) geometrical information provided line slopes, line lengths and coordinates of every vertex; (b) general information, corresponding to geometric information sorted by direction; and (c) drawing information: on the existence or absence of hidden lines or auxiliary lines in drawings.

4. Results

Full numerical data and results are tabulated in the tables included in the annexes.

During the experiment we have detected some incidences, whose analysis will help us to improve the approach of questionnaires for future experiments.

For instance, figure 8 shows the drawing 121. We interpret it as high quality, for that reason we conclude that the subject has detected that faces in the model are not actually parallel, and, consequently, has depicted this physical fault in his drawing.

Similarly, in figure 9, we realize that the subject has interpreted the upper surface of the model as curved.

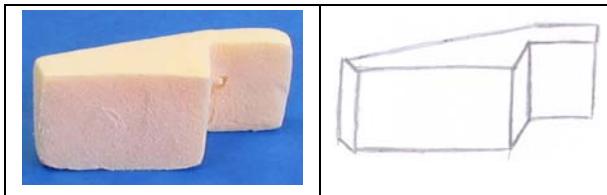


Figure 8. Drawing 121

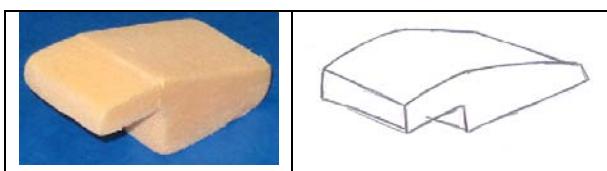


Figure 9. Drawing 38

We conclude that in order to prevent people from perceiving irrelevant imperfections in the models, in future experiments we will have to improve the quality of some models.

Regarding to representation, 7 out of 147 subjects chose non-pictorial orthographic projections: These representations include a single view or multiview projections (as it is shown in figure 10).

Therefore the pictorial tetrahedron example didn't convey them to use pictorial projections. Thus we should consider the alternatives of accepting a small quantity of non valid-tests, or changing the text and/or the image of the example to strongly convey subjects to use pictorial representations.

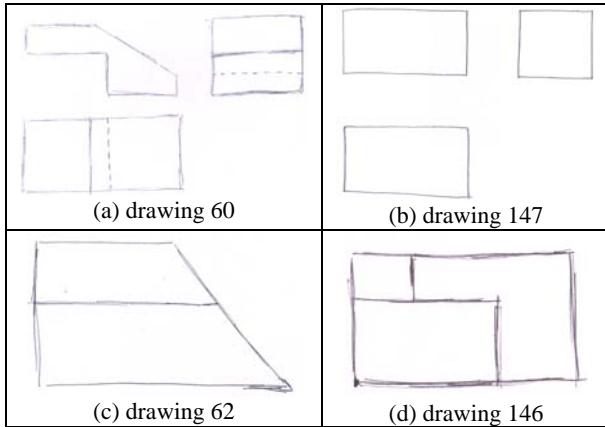


Figure 10. Non-pictorial orthographic projections

We also found another problem. In 12 sketches, segments in one direction were limited to one (direction 2 in figure 11). This prevents from analyzing convergence in such direction. So, we should find a way to convey subjects to not to use those particular points of view, or add hidden lines.

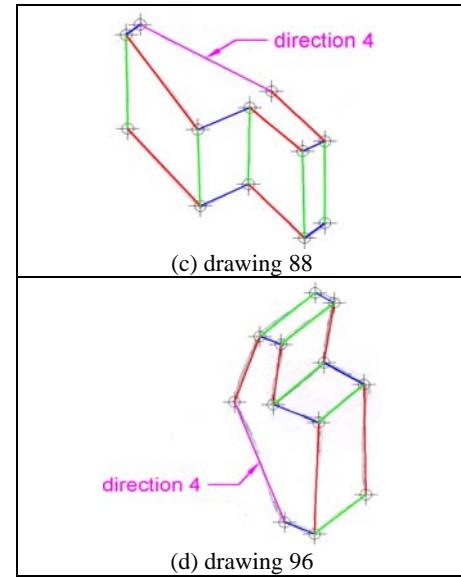
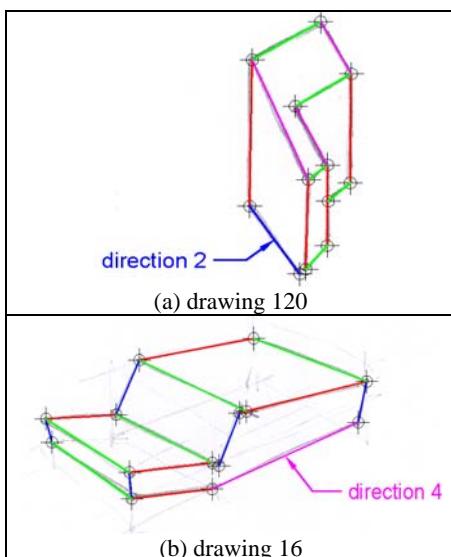


Figure 11. Problematic orientations of models

To note that 5 from an overall of 147 subjects used other depth cues as shading (figure 12), in order to enforce the spatial perception.

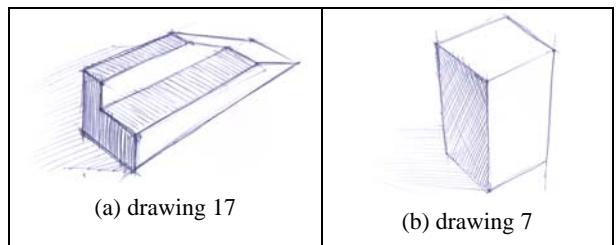


Figure 12. Shaded drawings

According to the results, both product and graphic designers trend towards using axonometric projections in order to sketch polyhedral engineering parts. But we have not enough information about their preferences in another order of situations, for instance sketching more difficult engineer parts, objects with greater dimensions. We will have to take it into account in future researches.

5. Acknowledgments

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6. References

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7. Annex

This annex includes detailed information of the vectorised lines.

First of all, we show information from experts classification in table 1.

Next, information is presented by each model.

- Tables 2, 3 and 4, show exported data from CAD application.
- Tables 5, 6 and 7, show additional information contributed by questionnaires.
- Tables 8, 9 and 10, show calculated information in order to extract conclusions.

7.1. Human perception

As it was related previously, each sketch was subjectively classified by six experts (four of them belonging to the research team and two external experts), in order to determinate how humans would classify the sketches. The data is tabulated on table 1, as follows:

- Column “Skt” shows the label that identifies every sketch.
- The following six columns, show the classification made by each expert, where the code used is:
 1. Clearly axonometric projection
 2. Clearly central projection
 3. Clearly non-pictorial orthographic projection
 4. Uncertain classification
 5. Medium quality depiction
 6. Not classifiable.
- Column “Coinc” shows the agreements among experts for each sketch.
- “Proj” represents the final classification according to the previous described code (1, 2, 3 and 6).

- “Qlty” represents the quality classification according to the following code:

1. Good quality depiction
5. Medium quality depiction
6. Not classifiable. Due to sketch poor quality, and also experts disagreements (agreement means that four or more experts chose the same classification)

Table 1: Drawing classification by experts.

Skt	1	2	3	4	5	6	Coinc	Proj	Qlty
1	1	1	1	1	1	1	6	1	1
2	1	1	1	1	1	1	6	1	1
3	1	1	1	1	1	1	6	1	1
4	1	1	1	1	1	1	6	1	1
5	1	1	1	1	1	1	6	1	1
6	4	4	1	1	2	2	2	6	6
7	2	2	2	2	1	2	5	2	1
8	1	1	1	1	1	1	6	1	1
9	1	1	1	1	1	1	6	1	1
10	4	1	1	1	1	1	5	1	1
11	1	1	1	1	1	1	6	1	1
12	1	1	1	1	1	1	6	1	1
13	1	4	1	1	5	1	4	1	5
14	1	1	1	1	1	1	6	1	1
15	1	1	1	1	1	1	6	1	1
16	5	1	1	1	5	1	4	1	5
17	4	2	2	1	1	4	2	6	6
18	2	2	2	2	2	2	6	2	1
19	1	1	1	1	1	1	6	1	1
20	1	1	1	1	1	1	6	1	1
21	1	1	1	1	1	1	6	1	1
22	1	1	1	1	1	1	6	1	1
23	1	1	1	1	1	1	4	5	1
24	1	1	5	1	1	1	5	1	5
25	1	1	1	1	1	1	6	1	1
26	1	1	1	1	1	1	6	1	1
27	1	1	1	1	1	1	6	1	1
28	1	1	1	1	1	1	6	1	1
29	1	1	5	1	5	1	4	1	5
30	1	1	1	1	1	1	6	1	1
31	5	1	4	5	5	1	2	6	6
32	1	1	1	1	1	1	6	1	1
33	1	1	1	1	1	1	6	1	1
34	1	1	1	1	1	1	6	1	1
35	1	1	1	1	1	1	6	1	1
36	1	1	1	1	1	1	6	1	1
37	5	1	6	4	1	1	3	6	6
38	5	1	6	1	5	1	3	6	6
39	3	3	6	3	3	3	5	6	6
40	1	1	1	1	1	1	6	1	1
41	1	1	1	1	1	1	6	1	1
42	1	1	1	1	1	1	6	1	1
43	1	1	1	1	1	1	6	1	1
44	1	1	2	1	1	2	4	1	1
45	1	1	4	1	1	1	5	1	1
46	1	1	1	1	1	1	6	1	1
47	1	1	1	1	1	1	6	1	1
48	1	1	5	1	1	1	5	1	5
49	5	1	4	1	5	1	3	6	6
50	1	1	1	1	1	1	6	1	1
51	1	1	1	1	1	1	6	1	1
52	1	1	1	1	1	1	6	1	1
53	1	1	5	1	1	1	5	1	5
54	1	1	1	1	1	1	6	1	1
55	3	3	5	3	3	3	5	3	5
56	1	1	5	1	1	1	5	1	5
57	1	1	1	1	1	1	6	1	1
58	5	1	5	1	1	1	4	1	5
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60	3	3	3	3	3	3	6	3	1

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99	6	6	6	6	6	1	5	6	6
100	3	3	6	6	3	3	4	6	6
101	1	3	6	6	2	1	2	6	6
102	1	1	1	1	4	1	5	1	1
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123	1	1	5	4	1	1	4	1	5
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126	2	6	6	3	2	4	2	6	6
127	1	1	1	1	1	1	6	1	1
128	6	1	6	6	6	1	4	6	6
129	6	6	6	6	6	1	5	6	6
130	6	1	6	5	4	1	2	6	6
131	2	6	6	6	1	1	3	6	6
132	1	1	5	4	5	1	3	6	6
133	1	1	6	4	5	1	3	6	6
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138	1	1	1	1	1	1	1	6	1	1
139	1	1	1	1	1	1	1	6	1	1
140	1	1	1	1	1	1	1	6	1	1
141	1	1	1	1	1	1	1	6	1	1
142	1	1	1	1	1	1	1	6	1	1
143	1	1	1	1	1	1	1	6	1	1
144	1	1	5	1	1	1	5	1	5	1
145	2	6	6	2	1	3	6	6	6	6
146	3	3	3	3	3	3	6	3	1	1
147	3	3	3	3	3	3	6	3	1	1

7.2. Exported data:

Tables 2, 3 and 4, show exported data from CAD application. The information tabulated from each vectorised line drawing we extracted, is:

- General information as:
 - “F” includes the labels that identify every file that contains a sketch.
 - “M” identifies the model.
 - “D” shows the direction which the extracted line belongs.
- Geometrical information as:
 - “Ang” represents the line slope.
 - “Ini X, Ini Y” define coordinates of initial line vertex.
 - “Len” shows the line length.
 - “End X, End Y” define coordinates of final line vertex.
- Drawing information as:
 - “H” shows the existence (1) or absence (0) of has hidden lines in drawings.
 - “A” shows if auxiliary lines are used in the drawing (1), or not (0).

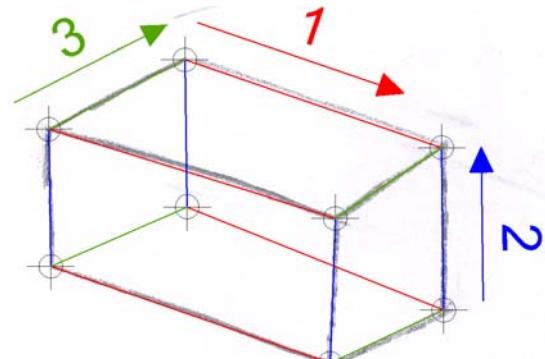


Table 2: Exported data from CAD application (model 1)

F	M	D	Ang	Ini X	Ini Y	Len	End X	End Y	H	A
7	1	1	85,99	109,6	35,0	57,4	113,7	92,3	0	0
7	1	1	90,97	80,1	19,9	56,3	79,2	76,3	0	0
7	1	1	94,58	58,0	39,0	56,7	53,5	95,6	0	0
7	1	2	144,37	113,7	92,3	29,8	89,4	109,6	0	0
7	1	2	143,04	79,2	76,3	32,1	53,5	95,6	0	0

7	1	2	139,17	80,1	19,9	29,2	58,0	39,0	0	0
7	1	3	27,09	80,1	19,9	33,2	109,6	35,0	0	0
7	1	3	24,89	79,2	76,3	38,0	113,7	92,3	0	0
7	1	3	21,36	53,5	95,6	38,6	89,4	109,6	0	0
8	1	1	327,17	30,9	55,7	41,9	66,1	32,9	0	1
8	1	1	327,59	29,6	78,9	41,7	64,8	56,5	0	1
8	1	1	328,71	50,2	88,4	42,6	86,6	66,3	0	1
8	1	2	92,79	87,7	42,3	24,0	86,6	66,3	0	1
8	1	2	93,21	66,1	32,9	23,6	64,8	56,5	0	1
8	1	2	93,18	30,9	55,7	23,2	29,6	78,9	0	1
8	1	3	22,13	65,6	33,3	23,9	87,7	42,3	0	1
8	1	3	24,17	64,8	56,5	23,9	86,6	66,3	0	1
8	1	3	24,87	29,6	78,9	22,7	50,2	88,4	0	1
13	1	1	36,83	70,3	39,7	45,0	106,3	66,7	0	0
13	1	1	37,62	69,5	62,1	46,0	105,9	90,2	0	0
13	1	1	33,88	49,7	71,6	39,3	82,3	93,5	0	0
13	1	2	91,00	106,3	66,7	23,5	105,9	90,2	0	0
13	1	2	92,08	70,3	39,7	22,4	69,5	62,1	0	0
13	1	2	91,27	50,2	49,6	22,1	49,7	71,6	0	0
13	1	3	333,92	50,2	49,6	22,4	70,3	39,7	0	0
13	1	3	334,31	49,7	71,6	21,9	69,5	62,1	0	0
13	1	3	351,96	82,3	93,5	23,8	105,9	90,2	0	0
18	1	1	23,60	62,3	33,5	61,5	118,7	58,1	0	0
18	1	1	9,78	62,0	74,6	59,0	120,2	84,7	0	0
18	1	1	9,43	30,2	77,1	64,8	94,0	87,7	0	0
18	1	2	353,24	94,0	87,7	26,3	120,2	84,7	0	0
18	1	2	336,67	28,8	47,9	36,5	62,3	33,5	0	0
18	1	2	355,50	30,2	77,1	32,0	62,0	74,6	0	0
18	1	3	86,82	118,7	58,1	26,6	120,2	84,7	0	0
18	1	3	90,41	62,3	33,5	41,1	62,0	74,6	0	0
18	1	3	87,40	28,8	47,9	29,2	30,2	77,1	0	0
25	1	1	340,83	35,0	63,1	37,6	70,5	50,7	0	0
25	1	1	342,75	34,8	80,5	38,1	71,2	69,2	0	0
25	1	1	341,10	52,1	89,3	34,5	84,7	78,1	0	0
25	1	2	27,06	34,8	80,5	19,4	52,1	89,3	0	0
25	1	2	33,54	71,2	69,2	16,2	84,7	78,1	0	0
25	1	2	25,08	70,5	50,7	15,9	84,9	57,5	0	0
25	1	3	90,72	84,9	57,5	20,7	84,7	78,1	0	0
25	1	3	87,98	70,5	50,7	18,5	71,2	69,2	0	0
25	1	3	90,86	35,0	63,1	17,4	34,8	80,5	0	0
30	1	1	0,54	45,8	97,0	47,0	92,8	97,5	0	0
30	1	1	0,64	54,1	76,3	52,3	106,4	76,8	0	0
30	1	1	1,49	53,5	53,1	52,6	106,0	54,5	0	0
30	1	2	89,01	106,0	54,5	22,4	106,4	76,8	0	0
30	1	2	88,46	53,5	53,1	23,2	54,1	76,3	0	0
30	1	2	90,23	45,9	70,2	26,8	45,8	97,0	0	0
30	1	3	303,48	92,8	97,5	24,7	106,4	76,8	0	0
30	1	3	291,91	45,8	97,0	22,4	54,1	76,3	0	0
30	1	3	293,98	45,9	70,2	18,7	53,5	53,1	0	0
33	1	1	38,00	52,0	61,3	45,1	87,6	89,1	0	0
33	1	1	38,50	70,0	49,8	43,8	104,3	77,1	0	0
33	1	1	34,64	70,3	28,9	42,0	104,9	52,8	0	0
33	1	2	89,24	104,9	52,8	23,5	105,2	76,3	0	0
33	1	2	90,74	70,3	28,9	20,9	70,0	49,8	0	0
33	1	2	86,36	50,7	40,0	21,3	52,0	61,3	0	0
33	1	3	144,40	104,3	77,1	20,6	87,6	89,1	0	0
33	1	3	147,54	70,0	49,8	21,4	52,0	61,3	0	0
33	1	3	150,59	70,3	28,9	22,6	50,7	40,0	0	0
36	1	1	92,80	89,9	59,9	36,8	88,1	96,7	0	0
36	1	1	91,98	71,4	44,1	36,3	70,2	80,4	0	0
36	1	1	92,90	54,3	56,4	40,1	52,3	96,5	0	0
36	1	2	46,48	52,3	96,5	23,1	68,2	113,2	0	0
36	1	2	40,39	71,4	44,1	24,3	89,9	59,9	0	0
36	1	2	42,10	70,2	80,4	24,2	88,1	96,7	0	0
36	1	3	144,40	71,4	44,1	21,1	54,3	56,4	0	0
36	1	3	138,19	70,2	80,4	24,0	52,3	96,5	0	0
36	1	3	140,38	88,1	96,7	25,9	68,2	113,2	0	0
37	1	1	41,41	74,5	54,7	33,2	99,4	76,6	0	0
37	1	1	33,38	71,4	80,6	32,2	98,2	98,3	0	0
37	1	1	38,64	47,9	65,4	32,8	73,6	85,9	0	0
37	1	2	26,64	73,6	85,9	27,6	98,2	98,3	0	0
37	1	2	30,53	53,3	42,1	24,7	74,5	54,7	0	0
37	1	2	32,91	47,9	65,4	27,9	71,4	80,6	0	0

37	1	3	92,96	99,4	76,6	21,7	98,2	98,3	0	0	
37	1	3	96,81	74,5	54,7	26,1	71,4	80,6	0	0	
37	1	3	102,85	53,3	42,1	23,9	47,9	65,4	0	0	
47	1	1	24,16	34,6	77,5	35,7	67,2	92,1	0	0	
47	1	1	25,96	57,4	76,3	33,4	87,4	90,9	0	0	
47	1	1	23,64	57,7	53,3	33,3	88,2	66,7	0	0	
47	1	2	352,32	35,6	56,3	22,3	57,7	53,3	0	0	
47	1	2	357,04	34,6	77,5	22,9	57,4	76,3	0	0	
47	1	2	356,64	67,2	92,1	20,3	87,4	90,9	0	0	
47	1	3	91,84	88,2	66,7	24,2	87,4	90,9	0	0	
47	1	3	90,69	57,7	53,3	23,0	57,4	76,3	0	0	
47	1	3	92,62	35,6	56,3	21,2	34,6	77,5	0	0	
48	1	1	356,94	96,3	76,2	31,3	127,6	74,5	1	0	
48	1	1	355,01	97,3	96,1	32,0	129,3	93,3	1	0	
48	1	1	353,37	86,8	69,0	29,5	116,1	65,6	1	0	
48	1	1	355,58	87,2	85,3	30,3	117,4	83,0	1	0	
48	1	2	85,12	127,6	74,5	17,1	129,1	91,5	1	0	
48	1	2	90,56	96,3	76,2	19,1	96,1	95,3	1	0	
48	1	2	88,58	86,8	69,0	16,4	87,2	85,3	1	0	
48	1	2	85,66	116,1	65,6	17,5	117,4	83,0	1	0	
48	1	3	33,12	87,7	70,6	10,3	96,3	76,2	1	0	
48	1	3	41,54	118,0	66,0	12,8	127,6	74,5	1	0	
48	1	3	38,86	118,6	83,0	13,5	129,1	91,5	1	0	
48	1	3	43,07	87,7	87,0	13,2	97,3	96,1	1	0	
50	1	1	358,72	61,5	69,3	52,2	113,7	68,2	1	0	
50	1	1	358,95	43,2	54,8	52,9	96,1	53,8	1	0	
50	1	1	0,03	60,4	96,7	52,8	113,2	96,7	1	0	
50	1	1	359,86	41,6	83,0	54,3	95,9	82,9	1	0	
50	1	2	90,39	96,1	53,8	29,1	95,9	82,9	1	0	
50	1	2	92,37	114,3	69,3	27,5	113,2	96,7	1	0	
50	1	2	93,17	43,2	54,8	28,3	41,6	83,0	1	0	
50	1	2	92,26	61,5	69,3	27,3	60,4	96,7	1	0	
50	1	3	36,03	41,6	83,0	23,2	60,4	96,7	1	0	
50	1	3	38,53	43,2	54,8	23,3	61,5	69,3	1	0	
50	1	3	40,26	96,1	53,8	23,9	114,3	69,3	1	0	
50	1	3	38,62	95,9	82,9	22,1	113,2	96,7	1	0	
51	1	1	1,20	35,9	73,0	16,4	53,8	89,7	74,1	1	0
51	1	1	0,91	46,1	85,9	55,3	101,4	86,7	1	0	
51	1	1	2,09	35,4	50,7	54,8	90,2	52,7	1	0	
51	1	1	1,08	46,6	63,1	55,0	101,6	64,2	1	0	
51	1	2	91,34	90,2	52,7	21,4	89,7	74,1	1	0	
51	1	2	90,48	101,6	64,2	22,6	101,4	86,7	1	0	
51	1	2	88,60	35,4	50,7	22					

59	1	2	327,27	72,5	98,4	15,7	85,7	89,9	0	0
59	1	2	327,42	60,5	90,7	16,7	74,6	81,7	0	0
59	1	3	31,89	72,6	52,3	14,4	84,8	59,9	0	0
59	1	3	36,44	74,6	81,7	13,9	85,7	89,9	0	0
59	1	3	32,78	60,5	90,7	14,3	72,5	98,4	0	0
64	1	1	25,91	41,5	59,8	50,0	86,5	81,6	1	0
64	1	1	27,69	63,1	42,0	47,7	105,3	64,1	1	0
64	1	1	25,66	42,9	86,7	50,4	88,3	108,5	1	0
64	1	1	27,17	63,7	69,2	49,2	107,5	91,7	1	0
64	1	2	85,52	105,3	64,1	27,6	107,5	91,7	1	0
64	1	2	86,24	86,5	81,6	26,9	88,3	108,5	1	0
64	1	2	87,14	41,5	59,8	26,9	42,9	86,7	1	0
64	1	2	88,75	63,1	42,0	27,2	63,7	69,2	1	0
64	1	3	320,45	41,5	59,8	27,9	63,1	42,0	1	0
64	1	3	319,94	42,9	86,7	27,2	63,7	69,2	1	0
64	1	3	316,98	89,6	108,4	24,5	107,5	91,7	1	0
64	1	3	317,08	86,5	81,6	25,6	105,3	64,1	1	0
66	1	1	29,99	47,2	50,5	27,5	71,0	64,3	0	0
66	1	1	29,18	47,4	69,8	26,7	70,7	82,8	0	0
66	1	1	27,91	31,8	75,8	26,1	54,9	88,0	0	0
66	1	2	91,11	71,0	64,3	18,6	70,7	82,8	0	0
66	1	2	89,46	47,2	50,5	19,3	47,4	69,8	0	0
66	1	2	91,52	32,3	56,4	19,4	31,8	75,8	0	0
66	1	3	342,02	54,9	88,0	16,6	70,7	82,8	0	0
66	1	3	339,16	31,8	75,8	16,7	47,4	69,8	0	0
66	1	3	338,52	32,3	56,4	16,0	47,2	50,5	0	0
68	1	1	359,09	39,7	59,6	33,7	73,4	59,1	0	0
68	1	1	5,09	54,0	75,2	36,1	89,9	78,5	0	0
68	1	1	7,30	43,3	91,9	34,4	77,4	96,3	0	0
68	1	2	49,47	73,4	59,1	25,5	89,9	78,5	0	0
68	1	2	47,61	39,7	59,6	21,2	54,0	75,2	0	0
68	1	2	37,10	27,7	80,1	19,6	43,3	91,9	0	0
68	1	3	125,08	89,9	78,5	21,8	77,4	96,3	0	0
68	1	3	122,53	54,0	75,2	19,7	43,3	91,9	0	0
68	1	3	122,29	40,2	60,2	23,5	27,7	80,1	0	0
71	1	1	0,83	44,5	58,3	40,4	85,0	58,9	1	0
71	1	1	0,10	59,6	67,8	38,5	98,1	67,9	1	0
71	1	1	2,96	44,8	77,7	40,9	85,6	79,8	1	0
71	1	1	0,00	59,3	88,5	39,2	98,6	88,5	1	0
71	1	2	90,72	59,6	67,8	20,6	59,3	88,5	1	0
71	1	2	89,34	44,5	58,3	19,4	44,8	77,7	1	0
71	1	2	88,15	85,0	58,9	20,9	85,6	79,8	1	0
71	1	2	88,64	98,1	67,9	20,6	98,6	88,5	1	0
71	1	3	33,96	85,6	79,8	15,6	98,6	88,5	1	0
71	1	3	34,50	85,0	58,9	15,9	98,1	67,9	1	0
71	1	3	36,58	44,8	77,7	18,1	59,3	88,5	1	0
71	1	3	32,33	44,5	58,3	17,8	59,6	67,8	1	0
73	1	1	325,28	62,4	76,3	34,6	90,8	56,6	0	0
73	1	1	325,78	45,0	76,0	34,3	73,4	56,7	0	0
73	1	1	328,93	44,9	58,5	33,3	73,5	41,3	0	0
73	1	2	91,98	91,4	40,8	15,8	90,8	56,6	0	0
73	1	2	90,41	73,5	41,3	15,4	73,4	56,7	0	0
73	1	2	89,64	44,9	58,5	17,4	45,0	76,0	0	0
73	1	3	1,08	45,0	76,0	17,3	62,4	76,3	0	0
73	1	3	359,64	73,4	56,7	17,4	90,8	56,6	0	0
73	1	3	358,26	73,5	41,3	17,9	91,4	40,8	0	0
74	1	1	359,69	38,6	57,3	35,4	74,0	57,1	0	1
74	1	1	359,39	38,4	42,0	35,6	74,0	41,6	0	1
74	1	1	0,30	38,1	87,9	36,2	74,2	88,1	0	1
74	1	1	1,52	38,1	70,9	35,6	73,6	71,8	0	1
74	1	2	90,00	90,5	71,7	16,1	90,5	87,7	0	1
74	1	2	90,00	107,5	72,0	15,5	107,5	87,5	0	1
74	1	2	90,00	38,1	70,9	17,0	38,1	87,9	0	1
74	1	2	88,00	73,6	71,8	16,3	74,2	88,1	0	1
74	1	3	90,00	74,0	41,6	15,5	74,0	57,1	0	1
74	1	3	89,29	38,4	42,0	15,3	38,6	57,3	0	1
75	1	1	14,59	70,6	88,6	27,2	96,9	95,4	0	0
75	1	1	21,85	74,9	62,1	26,7	99,7	72,1	0	0
75	1	1	19,72	65,2	74,8	24,4	88,2	83,1	0	0
75	1	2	135,40	106,2	86,2	13,0	96,9	95,4	0	0
75	1	2	136,19	99,7	72,1	15,9	88,2	83,1	0	0
75	1	2	127,44	74,9	62,1	16,0	65,2	74,8	0	0
75	1	3	65,26	99,7	72,1	15,6	106,2	86,2	0	0

75	1	3	54,80	88,2	83,1	15,1	96,9	95,4	0	0
75	1	3	65,33	65,2	74,8	15,4	71,6	88,8	0	0
84	1	1	32,77	119,4	15,6	36,1	149,7	35,2	1	0
84	1	1	25,93	99,4	26,5	34,9	130,8	41,7	1	0
84	1	1	30,29	98,7	46,0	35,7	129,5	64,0	1	0
84	1	1	31,98	118,3	39,0	35,8	148,7	58,0	1	0
84	1	2	92,57	149,7	35,2	22,9	148,7	58,0	1	0
84	1	2	93,40	130,8	41,7	22,3	129,5	64,0	1	0
84	1	2	92,14	99,4	26,5	19,5	98,7	46,0	1	0
84	1	2	92,57	119,4	15,6	23,4	118,3	39,0	1	0
84	1	3	331,46	99,4	26,5	22,7	119,4	35,2	1	0
84	1	3	340,79	130,8	41,7	20,0	149,7	35,2	1	0
84	1	3	340,47	98,7	46,0	20,8	118,3	39,0	1	0
84	1	3	342,65	129,5	64,0	20,1	148,7	58,0	1	0
86	1	1	38,61	51,2	41,7	47,9	88,6	71,6	1	0
86	1	1	41,50	81,4	43,0	44,9	115,1	72,7	1	0
86	1	1	36,35	50,8	71,0	45,6	87,5	98,0	1	0
86	1	1	36,96	79,7	71,7	45,3	115,9	99,0	1	0
86	1	2	92,28	88,6	71,6	26,4	87,5	98,0	1	0
86	1	2	88,24	115,1	72,7	26,2	115,9	99,0	1	0
86	1	2	90,74	51,2	41,7	29,2	50,8	71,0	1	0
86	1	2	93,50	81,4	43,0	28,8	79,7	71,7	1	0
86	1	3	2,34	51,2	41,7	30,3	81,4	43,0	1	0
86	1	3	1,50	50,8	71,0	28,9	79,7	71,7	1	0
86	1	3	1,96	87,5	98,0	28,4	115,9	99,0	1	0
86	1	3	2,44	88,6	71,6	26,5	115,1	72,7	1	0
90	1	1	31,30	57,9	23,4	52,5	102,8	50,7	0	0
90	1	1	32,89	58,6	48,3	52,9	103,1	77,1	0	0
90	1	1	33,65	38,4	63,6	52,4	82,1	92,6	0	0
90	1	2	89,35	102,8	50,7	26,4	103,1	77,1	0	0
90	1	2	88,46	57,9	23,4	24,9	58,6	48,3	0	0
90	1	2	89,34	38,1	37,8	25,8	38,4	63,6	0	0
90	1	3	323,45	82,1	92,6	26,1	103,1	77,1	0	0
90	1	3	322,89	38,4	63,6	25,3	58,6	48,3	0	0
90	1	3	324,06	38,1	37,8	24,4	57,9	23,4	0	0
92	1	1	30,06	47,2	43,7	49,2	89,8	68,4	0	0
92	1	1	27,42	47,6	48,6	47,0	89,3	90,2	0	0
92	1	1	29,07	24,2	76,0	52,2	69,8	101,4	0	0
92	1	2	91,40	89,8	68,4	21,8	89,3	90,2	0	0
92	1	2	89,18	47,2	43,7	24,8	47,6	68,6	0	0
92	1	2	88,74	23,6	51,7	24,3	24,2	76,0	0	0
92	1	3	330,22	69,8	101,4	22,5	89,3	90,2	0	0
92	1	3	342,36	24,2	76,0	24,6				

99	1	1	40,48	51,0	48,8	48,5	87,9	80,3	0	0
99	1	2	101,86	108,6	44,6	17,1	105,1	61,3	0	0
99	1	2	94,69	72,0	17,7	12,5	71,0	30,2	0	0
99	1	2	91,57	53,0	18,1	29,7	52,2	47,8	0	0
99	1	3	312,17	87,9	80,3	25,6	105,1	61,3	0	0
99	1	3	316,95	52,2	47,8	25,8	71,0	30,2	0	0
99	1	3	359,41	53,0	18,1	21,0	73,9	17,9	0	0
101	1	1	81,07	108,3	54,6	43,1	115,0	97,1	0	0
101	1	1	85,92	86,7	48,5	48,1	90,1	96,5	0	0
101	1	1	82,07	69,4	49,5	30,4	73,6	79,6	0	0
101	1	2	15,66	86,7	48,5	22,4	108,3	54,6	0	0
101	1	2	1,43	90,1	96,5	24,9	115,0	97,1	0	0
101	1	3	225,78	90,1	96,5	23,6	73,6	79,6	0	0
101	1	3	176,91	86,7	48,5	17,3	69,4	49,5	0	0
102	1	1	38,09	47,7	48,5	22,9	65,7	62,6	0	0
102	1	1	36,40	48,0	63,4	21,9	65,7	76,4	0	0
102	1	1	41,92	35,6	70,8	21,4	51,6	85,1	0	0
102	1	2	90,00	65,7	62,6	13,8	65,7	76,4	0	0
102	1	2	88,75	47,7	48,5	14,9	48,0	63,4	0	0
102	1	2	88,80	35,3	55,4	15,4	35,6	70,8	0	0
102	1	3	148,29	65,7	76,4	16,6	51,6	85,1	0	0
102	1	3	149,06	48,0	63,4	14,4	35,6	70,8	0	0
102	1	3	150,92	47,7	48,5	14,2	35,3	55,4	0	0
104	1	1	359,62	79,2	76,0	34,7	113,9	75,8	0	0
104	1	1	359,72	53,6	47,1	48,3	101,8	46,9	0	0
104	1	1	359,45	53,6	69,2	48,9	102,4	68,7	0	0
104	1	2	90,53	114,1	63,2	12,6	113,9	75,8	0	0
104	1	2	88,47	101,8	46,9	21,8	102,4	68,7	0	0
104	1	2	90,00	53,6	47,1	22,0	53,6	69,2	0	0
104	1	3	53,11	101,8	46,9	20,4	114,1	63,2	0	0
104	1	3	31,62	102,4	68,7	13,6	113,9	75,8	0	0
104	1	3	15,00	53,6	69,2	26,6	79,2	76,0	0	0
108	1	1	24,76	76,7	29,9	44,1	116,8	48,4	0	0
108	1	1	21,08	76,0	51,2	43,3	116,4	66,8	0	0
108	1	1	20,27	52,9	64,9	43,3	93,5	79,9	0	0
108	1	2	91,20	116,8	48,4	18,5	116,4	66,8	0	0
108	1	2	92,07	76,7	29,9	21,4	76,0	51,2	0	0
108	1	2	91,04	53,2	43,7	21,2	52,9	64,9	0	0
108	1	3	149,47	76,7	29,9	27,3	53,2	43,7	0	0
108	1	3	149,41	76,0	51,2	26,8	52,9	64,9	0	0
108	1	3	150,28	116,4	66,8	26,4	93,5	79,9	0	0
111	1	1	24,68	63,5	47,0	42,4	102,0	64,7	0	0
111	1	1	21,68	63,1	68,7	40,6	100,8	83,8	0	0
111	1	1	22,88	40,3	78,0	43,1	80,0	94,7	0	0
111	1	2	93,47	102,0	64,7	19,1	100,8	83,8	0	0
111	1	2	91,02	63,5	47,0	21,7	63,1	68,7	0	0
111	1	2	90,00	40,3	57,0	21,0	40,3	78,0	0	0
111	1	3	152,20	100,8	83,8	23,5	80,0	94,7	0	0
111	1	3	157,88	63,1	68,7	24,5	40,3	78,0	0	0
111	1	3	156,59	63,5	47,0	25,2	40,3	57,0	0	0
113	1	1	30,65	55,7	28,6	43,1	92,8	50,5	0	0
113	1	1	26,99	56,7	50,1	41,0	93,2	68,7	0	0
113	1	1	25,73	39,9	64,1	39,9	75,9	81,4	0	0
113	1	2	88,67	92,8	50,5	18,2	93,2	68,7	0	0
113	1	2	87,85	37,1	44,6	18,8	37,8	63,4	0	0
113	1	2	87,38	55,7	28,6	21,6	56,7	50,1	0	0
113	1	3	319,21	37,1	44,6	24,6	55,7	28,6	0	0
113	1	3	323,83	75,9	81,4	21,5	93,2	68,7	0	0
113	1	3	320,27	39,9	64,1	21,8	56,7	50,1	0	0
114	1	1	33,11	65,1	42,9	40,3	98,9	64,9	0	0
114	1	1	33,27	65,0	66,1	39,8	98,3	87,9	0	0
114	1	1	30,84	45,4	79,3	42,1	81,5	100,9	0	0
114	1	2	91,41	98,9	64,9	23,0	98,3	87,9	0	0
114	1	2	91,36	45,9	55,5	23,8	45,4	79,3	0	0
114	1	2	90,35	65,1	42,9	23,1	65,0	66,1	0	0
114	1	3	322,32	81,5	100,9	21,2	98,3	87,9	0	0
114	1	3	325,95	45,4	79,3	23,7	65,0	66,1	0	0
114	1	3	326,82	45,9	55,5	22,9	65,1	42,9	0	0
117	1	1	20,61	59,1	44,6	40,9	97,3	59,0	0	0
117	1	1	20,59	60,6	65,9	40,1	98,2	80,0	0	0
117	1	2	17,79	43,1	80,7	36,5	77,8	91,9	0	0
117	1	2	87,69	97,3	59,0	21,0	98,2	80,0	0	0
117	1	2	91,53	43,7	59,6	21,2	43,1	80,7	0	0

117	1	2	85,83	59,1	44,6	21,3	60,6	65,9	0	0
117	1	3	315,82	43,7	59,6	21,4	59,1	44,6	0	0
117	1	3	329,77	77,8	91,9	23,5	98,2	80,0	0	0
117	1	3	319,77	43,1	80,7	22,9	60,6	65,9	0	0
122	1	1	0,57	62,1	46,9	57,9	120,0	47,5	0	0
122	1	1	0,65	48,3	63,3	61,4	109,8	64,0	0	0
122	1	1	2,83	48,1	91,9	64,4	112,4	95,1	0	0
122	1	2	80,89	120,0	47,5	27,2	124,4	74,3	0	0
122	1	2	85,07	109,8	64,0	31,2	112,4	95,1	0	0
122	1	2	90,35	48,3	63,3	28,6	48,1	91,9	0	0
122	1	3	299,85	112,4	95,1	23,9	124,4	74,3	0	0
122	1	3	298,93	109,8	64,0	19,0	119,0	47,3	0	0
122	1	3	310,12	48,3	63,3	21,5	62,1	46,9	0	0
125	1	1	26,98	47,2	38,8	43,1	85,6	58,3	0	0
125	1	1	26,12	47,4	58,5	42,7	85,7	77,3	0	0
125	1	1	24,86	33,6	67,4	44,7	74,2	86,2	0	0
125	1	2	89,70	85,6	58,3	19,0	85,7	77,3	0	0
125	1	2	89,59	47,2	38,8	19,7	47,4	58,5	0	0
125	1	2	89,45	33,4	46,4	21,0	33,6	67,4	0	0
125	1	3	322,04	74,2	86,2	14,6	85,7	77,3	0	0
125	1	3	326,90	33,6	67,4	16,4	47,4	58,5	0	0
125	1	3	326,35	33,4	64,1	15,2	46,1	38,0	0	0
126	1	1	1,41	28,1	74,5	35,0	63,1	75,4	0	0
126	1	1	1,33	20,6	68,8	48,4	69,0	69,9	0	0
126	1	1	359,66	20,1	95,4	47,5	67,6	95,1	0	0
126	1	1	1,56	27,4	87,8	34,2	61,7	88,7	0	0
126	1	2	137,40	69,0	69,9	8,1	63,1	75,4	0	0
126	1	2	227,23	67,6	95,1	8,7	61,7	88,7	0	0
126	1	2	313,96	20,1	95,4	10,6	27,4	87,8	0	0
126	1	2	37,62	20,6	68,8	9,4	28,1	74,5	0	0
126	1	3	276,01	61,7	88,7	13,4	63,1	75,4	0	0
126	1	3	273,23	67,6	95,1	25,3	69,0	69,9	0	0
126	1	3	269,08	20,1	95,4	26,3	19,7	69,1	0	0
126	1	3	272,75	27,4	87,8	13,3	28,1	74,5	0	0
127	1	1	3,49	37,0	64,1	50,0	87,0	67,1	1	0
127	1	1	3,92	23,0	75,7	52,9	75,8	79,3	1	0
127	1	1	359,92	22,4	100,4	53,3	75,7	100,3	1	0
127	1	1	2,29	37,0	84,9	49,7	86,6	86,9	1	0
127	1	2	93,74	77,1	79,5	20,9	75,7	100,3	1	0
127	1	2	91,00	87,0	67,1	19,8	86,6	86,9	1	0
127	1	2	91,29	23,0	75,7	24,7	22,4	100,4	1	0
127	1	2	90							

136	1	2	89,90	96,6	47,2	20,5	96,6	67,7	0	0
136	1	2	92,03	76,6	37,7	19,8	75,9	57,6	0	0
136	1	2	86,69	41,5	51,4	20,1	42,6	71,5	0	0
136	1	3	25,84	77,4	37,9	21,3	96,6	47,2	0	0
136	1	3	26,10	75,9	57,6	23,0	96,6	67,7	0	0
136	1	3	26,40	42,6	71,5	23,0	63,3	81,7	0	0
141	1	1	87,31	87,3	38,3	42,8	89,3	81,0	0	0
141	1	1	87,72	74,1	28,7	39,6	75,7	68,2	0	0
141	1	1	86,47	59,6	41,0	39,6	62,1	80,5	0	0
141	1	2	136,28	89,3	81,0	18,5	76,0	93,7	0	0
141	1	2	137,87	75,7	68,2	18,4	62,1	80,5	0	0
141	1	2	139,61	74,1	28,7	19,0	59,6	41,0	0	0
141	1	3	36,04	74,1	28,7	16,3	87,3	38,3	0	0
141	1	3	43,11	75,7	68,2	18,7	89,3	81,0	0	0
141	1	3	43,46	62,1	80,5	19,2	76,0	93,7	0	0
143	1	1	329,25	38,6	51,7	62,7	92,5	19,6	0	0
143	1	1	328,21	38,3	76,6	64,9	93,4	42,4	0	0
143	1	1	327,58	53,7	96,6	66,4	109,7	61,0	0	0
143	1	2	88,74	109,2	39,7	21,4	109,7	61,0	0	0
143	1	2	87,55	92,5	19,6	22,8	93,4	42,4	0	0
143	1	2	90,74	38,6	51,7	24,9	38,3	76,6	0	0
143	1	3	50,15	92,5	19,6	26,1	109,2	39,7	0	0
143	1	3	48,89	93,4	42,4	24,7	109,7	61,0	0	0
143	1	3	52,45	38,3	76,6	25,2	53,7	96,6	0	0
145	1	1	1,73	93,7	67,8	40,7	134,3	69,1	0	0
145	1	1	354,62	108,3	73,1	26,6	134,7	70,6	0	0
145	1	1	343,60	107,0	93,8	28,7	134,5	85,7	0	0
145	1	2	90,64	134,7	70,6	15,1	134,5	85,7	0	0
145	1	2	93,48	108,3	73,1	20,8	107,0	93,8	0	0
145	1	2	92,83	93,7	69,5	24,7	92,5	94,2	0	0
145	1	3	75,45	134,3	69,1	1,6	134,7	70,6	0	0
145	1	3	15,56	95,4	69,5	13,4	108,3	73,1	0	0
145	1	3	358,37	92,5	94,2	14,5	107,0	93,8	0	0
147	1	1	359,00	37,1	98,8	47,9	85,0	97,9	0	0
147	1	1	356,96	37,6	73,5	47,4	84,8	71,0	0	0
147	1	1	0,00	36,3	143,5	48,3	84,6	143,5	0	0
147	1	1	359,24	36,5	119,3	47,5	84,0	118,6	0	0
147	1	2	88,60	104,1	118,0	25,7	104,7	143,7	0	0
147	1	2	90,46	132,7	117,4	25,9	132,5	143,3	0	0
147	1	2	90,49	36,5	119,3	24,3	36,3	143,5	0	0
147	1	2	88,56	84,0	118,6	24,9	84,6	143,5	0	0
147	1	3	89,56	84,8	71,0	27,0	85,0	97,9	0	0
147	1	3	90,95	37,6	73,5	25,3	37,1	98,8	0	0

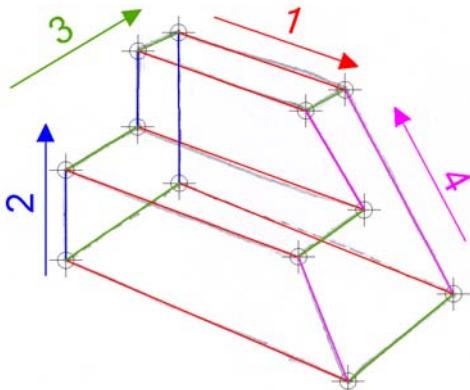


Table 3: Exported data from CAD application (model 2)

F	M	D	Ang	Inix	Iniy	Len	Endx	Endy	H	A
1	2	1	337,85	30,93	113,33	47,02	74,47	95,60	0	0
1	2	1	337,89	31,22	100,55	53,04	80,36	80,59	0	0
1	2	1	337,45	41,25	119,32	45,96	83,70	101,69	0	0
1	2	1	337,40	52,13	136,72	36,14	85,50	122,83	0	0
1	2	1	337,12	41,89	131,52	36,86	75,85	117,19	0	0
1	2	2	87,02	41,25	119,32	12,22	41,89	131,52	0	0
1	2	2	90,00	31,22	100,55	12,66	31,22	113,21	0	0
1	2	3	30,31	75,85	117,19	11,18	85,50	122,83	0	0
1	2	3	30,48	80,36	80,59	22,98	100,17	92,25	0	0

1	2	3	33,44	74,47	95,60	11,05	83,70	101,69	0	0
1	2	3	30,11	30,93	113,33	11,94	41,25	119,32	0	0
1	2	3	26,87	41,89	131,52	11,49	52,13	136,72	0	0
1	2	4	115,63	100,17	92,25	33,92	85,50	122,83	0	0
1	2	4	116,86	83,70	101,69	17,37	75,85	117,19	0	0
1	2	4	111,42	80,36	80,59	16,13	74,47	95,60	0	0
2	2	1	332,02	25,54	59,55	81,50	97,51	21,31	1	1
2	2	1	335,05	46,71	103,17	49,28	91,39	82,38	1	1
2	2	1	334,15	57,92	70,37	82,04	131,75	34,61	1	1
2	2	1	336,08	57,76	106,79	48,86	102,43	86,98	1	1
2	2	1	334,40	46,30	84,96	66,42	106,20	56,26	1	1
2	2	1	332,90	25,56	77,23	64,87	83,31	47,68	1	1
2	2	2	91,66	25,54	59,55	17,94	25,02	77,48	1	1
2	2	2	90,24	57,92	70,37	36,42	57,76	106,79	1	1
2	2	2	88,72	46,30	84,96	18,22	46,71	103,17	1	1
2	2	3	20,54	83,31	47,68	24,45	106,20	56,26	1	1
2	2	3	21,23	97,51	21,31	36,73	131,75	34,61	1	1
2	2	3	18,49	25,54	59,55	34,14	57,92	70,37	1	1
2	2	3	20,44	25,56	77,23	22,14	46,30	84,96	1	1
2	2	3	18,13	46,71	103,17	11,63	57,76	106,79	1	1
2	2	3	22,60	91,39	82,38	11,96	102,43	86,98	1	1
2	2	4	119,25	131,75	34,61	60,02	102,43	86,98	1	1
2	2	4	118,31	97,51	21,31	29,95	83,31	47,68	1	1
3	2	1	336,42	30,10	65,73	44,81	71,16	47,81	0	0
3	2	1	336,94	30,55	50,72	63,93	89,38	25,68	0	0
3	2	1	337,91	45,58	74,00	43,16	85,58	57,78	0	0
3	2	1	337,37	51,06	89,40	35,45	83,78	75,75	0	0
3	2	1	336,49	44,44	85,38	35,02	76,55	71,41	0	0
3	2	2	95,72	45,58	74,00	11,43	44,44	85,38	0	0
3	2	2	91,73	30,55	50,72	15,02	30,10	65,73	0	0
3	2	3	34,65	71,16	47,81	17,52	85,58	57,78	0	0
3	2	3	30,55	89,38	25,68	25,75	111,55	38,77	0	0
3	2	3	31,01	76,55	71,41	8,43	83,78	75,75	0	0
3	2	3	31,27	44,44	85,38	7,74	51,06	89,40	0	0
3	2	3	28,11	30,10	65,73	17,56	45,58	74,00	0	0
3	2	4	126,90	111,55	38,77	46,25	83,78	75,75	0	0
3	2	4	123,50	85,58	57,78	16,35	76,55	71,41	0	0
3	2	4	129,45	89,38	25,68	28,66	71,16	47,81	0	0
5	2	1	321,44	36,32	81,56	61,28	84,23	43,36	0	1
5	2	1	318,59	36,28	70,10	79,82	96,14	17,31	0	1
5	2	1	320,59	61,25	90,13	57,35	105,56	53,72	0	1
5	2	1	324,73	71,62	106,41	42,85	106,61	81,66	0	1
5	2	1	324,20	61,18	103,02	44,13	96,97	77,21	0	1
5	2	2	90,30	61,25	90,13	12,89	61,18	103,02	0	1
5	2	2	89,80	36,28	70,10	11,46	36,32	81,56	0	1
5	2	3	24,80	96,97	77,21	10,62	106,61	81,66	0	1
5	2	3	25,24	96,14	17,31	35,06	127,85	32,26	0	1
5	2	3	25,91	84,23	43,36	23,71	105,56	53,72	0	1
5	2	3	17,99	61,18	103,02	10,98	71,62	106,41	0	1
5	2	3	18,97	36,32	81,56	26,37	61,25	90,13	0	1
5	2	4	113,27	127,85	32,26	53,78	106,61	81,66	0	1
5	2	4	110,09	105,56	53,72	25,01	96,97	77,21	0	1
5	2	4	114,57	96,14	17,31	28,65	84,23	43,36	0	1
10	2	1	340,98	31,63	66,82	38,68	6			

12	2	1	22,79	37,53	77,16	39,09	73,57	92,29	0	1
12	2	2	87,76	31,64	59,24	23,67	32,57	82,89	0	1
12	2	2	85,91	36,68	65,27	11,91	37,53	77,16	0	1
12	2	2	81,99	45,65	39,50	11,91	47,31	51,29	0	1
12	2	3	123,45	95,26	70,73	17,78	85,46	85,57	0	1
12	2	3	117,71	73,57	92,29	6,72	70,44	98,24	0	1
12	2	3	123,00	107,51	65,23	25,17	93,81	86,34	0	1
12	2	3	130,89	37,53	77,16	7,58	32,57	82,89	0	1
12	2	3	127,25	47,31	51,29	17,56	36,68	65,27	0	1
12	2	3	125,36	45,65	39,50	24,20	31,64	59,24	0	1
12	2	4	153,00	93,81	86,34	26,22	70,44	98,24	0	1
12	2	4	150,53	85,46	85,57	13,66	73,57	92,29	0	1
12	2	4	155,80	107,51	65,23	13,43	95,26	70,73	0	1
15	2	1	332,74	32,21	73,23	32,95	61,51	58,14	0	1
15	2	1	332,51	32,71	63,16	41,83	69,82	43,85	0	1
15	2	1	329,61	44,02	81,61	31,36	71,07	65,75	0	1
15	2	1	330,68	49,26	97,09	24,26	70,42	85,21	0	1
15	2	1	329,38	43,24	92,89	25,28	65,00	80,01	0	1
15	2	2	93,95	44,02	81,61	11,30	43,24	92,89	0	1
15	2	2	92,85	32,71	63,16	10,09	32,21	73,23	0	1
15	2	3	38,53	61,51	58,14	12,22	71,07	65,75	0	1
15	2	3	36,97	70,92	41,74	19,59	86,58	53,52	0	1
15	2	3	32,80	64,44	81,35	7,11	70,42	85,21	0	1
15	2	3	35,36	32,21	73,23	14,48	44,02	81,61	0	1
15	2	3	34,89	43,24	92,89	7,34	49,26	97,09	0	1
15	2	4	117,03	86,58	53,52	35,57	70,42	85,21	0	1
15	2	4	113,02	71,07	65,75	16,95	64,44	81,35	0	1
15	2	4	119,86	70,92	41,74	18,91	61,51	58,14	0	1
17	2	1	30,42	53,63	58,99	56,16	102,06	87,43	0	0
17	2	1	32,93	52,68	44,81	78,21	118,32	87,33	0	0
17	2	1	26,08	40,02	69,06	55,80	90,14	93,59	0	0
17	2	1	22,78	33,08	84,54	38,46	68,54	99,43	0	0
17	2	1	24,58	40,11	79,57	38,79	75,39	95,70	0	0
17	2	2	86,15	52,68	44,81	14,21	53,63	58,99	0	0
17	2	2	89,51	40,02	69,06	10,51	40,11	79,57	0	0
17	2	2	88,87	32,59	59,84	24,70	33,08	84,54	0	0
17	2	3	152,64	102,06	87,43	13,42	90,14	93,59	0	0
17	2	3	151,41	75,39	95,70	7,80	68,54	99,43	0	0
17	2	3	153,29	118,32	87,33	20,23	100,25	96,42	0	0
17	2	3	144,74	40,11	79,57	8,62	33,08	84,54	0	0
17	2	3	143,52	53,63	58,99	16,93	40,02	69,06	0	0
17	2	3	143,20	52,68	44,81	25,09	32,59	59,84	0	0
17	2	4	179,65	118,32	87,33	16,26	102,06	87,43	0	0
17	2	4	171,88	90,14	93,59	14,90	75,39	95,70	0	0
17	2	4	174,57	100,25	96,42	31,86	68,54	99,43	0	0
19	2	1	324,93	41,17	77,20	46,63	79,33	50,40	0	0
19	2	1	323,83	41,04	65,01	64,14	92,82	27,15	0	0
19	2	1	325,86	53,08	85,99	44,34	89,78	61,11	0	0
19	2	1	325,56	60,00	104,73	29,35	84,21	88,13	0	0
19	2	1	326,53	52,67	99,46	30,23	77,89	82,79	0	0
19	2	2	89,40	53,08	85,99	13,13	53,22	99,12	0	0
19	2	2	89,39	41,04	65,01	12,20	41,17	77,20	0	0
19	2	3	41,33	78,59	51,27	14,89	89,78	61,11	0	0
19	2	3	43,34	92,82	27,15	28,66	113,66	46,82	0	0
19	2	3	40,21	77,89	82,79	8,28	84,21	88,13	0	0
19	2	3	35,70	52,67	99,46	9,03	60,00	104,73	0	0
19	2	3	38,67	41,17	77,20	14,60	52,56	86,32	0	0
19	2	4	125,50	113,66	46,82	50,73	84,21	88,13	0	0
19	2	4	118,74	89,78	61,11	24,73	77,89	82,79	0	0
19	2	4	123,12	93,89	28,09	26,64	79,33	50,40	0	0
21	2	1	338,95	58,96	89,00	25,52	82,77	79,84	0	0
21	2	1	339,49	65,11	93,44	26,64	90,06	84,11	0	0
21	2	1	340,53	58,72	72,63	35,35	92,05	60,85	0	0
21	2	1	340,99	45,56	49,35	43,95	87,12	35,03	0	0
21	2	1	339,98	45,28	61,53	33,59	76,84	50,03	0	0
21	2	2	89,17	58,72	72,63	16,37	58,96	89,00	0	0
21	2	2	91,34	45,56	49,35	12,18	45,28	61,53	0	0
21	2	3	35,41	76,84	50,03	18,66	92,05	60,85	0	0
21	2	3	36,10	87,12	35,03	25,26	107,53	49,91	0	0
21	2	3	30,35	82,77	79,84	8,45	90,06	84,11	0	0
21	2	3	39,54	45,28	61,53	17,43	58,72	72,63	0	0
21	2	3	35,82	58,96	89,00	7,59	65,11	93,44	0	0
21	2	4	117,05	107,53	49,91	38,39	90,06	84,11	0	0

21	2	4	116,04	92,05	60,85	21,14	82,77	79,84	0	0
21	2	4	124,42	87,12	35,03	18,18	76,84	50,03	0	0
24	2	1	14,14	43,56	68,70	45,35	87,54	79,78	0	0
24	2	1	13,75	39,56	72,64	48,11	86,29	84,08	0	0
24	2	1	14,46	43,60	54,76	56,18	98,01	68,78	0	0
24	2	1	16,97	56,79	21,83	67,65	121,49	41,57	0	0
24	2	1	17,88	56,71	39,63	52,35	106,53	55,71	0	0
24	2	2	90,26	56,79	21,83	17,80	56,71	39,63	0	0
24	2	2	90,18	43,60	54,76	13,94	43,56	68,70	0	0
24	2	2	88,22	38,62	42,47	30,19	39,56	72,64	0	0
24	2	3	123,11	106,53	55,71	15,61	98,01	68,78	0	0
24	2	3	121,79	121,49	41,57	29,39	106,01	66,55	0	0
24	2	3	113,73	87,54	79,78	4,42	85,76	83,82	0	0
24	2	3	131,35	56,79	21,83	27,50	38,62	42,47	0	0
24	2	3	130,91	56,71	39,63	20,02	43,60	54,76	0	0
24	2	3	135,38	43,56	68,70	5,62	39,56	72,64	0	0
24	2	4	138,37	106,01	66,55	26,39	86,29	84,08	0	0
24	2	4	133,60	98,01	68,78	15,18	87,54	79,78	0	0
26	2	1	136,62	121,49	41,57	20,58	106,53	55,71	0	0
26	2	1	343,66	46,53	69,94	42,13	86,96	58,09	0	1
26	2	1	340,81	46,19	53,75	50,28	93,67	37,22	0	1
26	2	1	346,72	60,13	79,07	38,41	97,51	70,24	0	1
26	2	1	350,14	67,39	102,72	24,54	91,57	98,52	0	1
26	2	1	348,12	59,44	98,05	25,71	84,60	92,75	0	1
26	2	2	92,06	60,13	79,07	18,99	59,44	98,05	0	1
26	2	2	88,80	46,19	53,75	16,20	46,53	69,94	0	1
26	2	3	49,01	86,96	58,09	16,10	97,51	70,24	0	1
26	2	3	50,00	93,67	37,22	29,24	112,47	59,62	0	1
26	2	3	39,59	84,60	92,75	9,04	91,57	98,52	0	1
26	2	3	33,86	46,53	69,94	16,38	60,13	79,07	0	1
26	2	3	30,43	59,44	98,05	9,22	67,39	102,72	0	1
26	2	4	118,25	112,47	59,62	44,16	91,57	98,52	0	1
26	2	4	119,84	97,51	70,24	25,95	84,60	92,75	0	1
26	2	4	107,82	93,67	37,22	21,93	86,96	58,09	0	1
27	2	1	330,39	65,64	85,76	40,36	100,73	65,81	0	1
27	2	1	330,46	72,57	93,13	41,38	108,57	72,74	0	1
27	2	1	33							

40	2	2	90,01	76,04	65,35	23,09	76,03	88,44	1	0
40	2	2	93,55	69,12	70,46	13,05	68,31	83,49	1	0
40	2	2	92,16	59,61	49,26	12,92	59,12	62,17	1	0
40	2	3	44,35	94,56	40,49	15,80	105,86	51,54	1	0
40	2	3	45,86	101,96	23,81	24,15	118,78	41,14	1	0
40	2	3	36,95	93,76	73,48	8,65	100,66	78,67	1	0
40	2	3	32,68	68,31	83,49	9,17	76,03	88,44	1	0
40	2	3	39,64	59,12	62,17	12,98	69,12	70,46	1	0
40	2	3	44,41	59,61	49,26	23,00	76,04	65,35	1	0
40	2	4	115,77	118,78	41,14	41,68	100,66	78,67	1	0
40	2	4	118,88	105,86	51,54	25,06	93,76	73,48	1	0
40	2	4	113,93	101,96	23,81	18,25	94,56	40,49	1	0
41	2	1	343,65	52,80	64,08	28,40	80,06	56,09	0	1
41	2	1	342,95	53,50	52,84	45,85	97,33	39,40	0	1
41	2	1	348,96	60,11	70,69	30,25	89,80	64,89	0	1
41	2	1	345,70	64,17	88,41	17,83	81,45	84,01	0	1
41	2	1	347,04	59,53	84,36	19,63	78,66	79,95	0	1
41	2	2	92,43	60,11	70,69	13,68	59,53	84,36	0	1
41	2	2	93,54	53,50	52,84	11,26	52,80	64,08	0	1
41	2	3	42,11	80,06	56,09	13,13	89,80	64,89	0	1
41	2	3	45,47	97,33	39,40	18,85	110,55	52,84	0	1
41	2	3	55,54	78,66	79,95	4,92	81,45	84,01	0	1
41	2	3	41,16	59,53	84,36	6,16	64,17	88,41	0	1
41	2	3	42,11	52,80	64,08	9,85	60,11	70,69	0	1
41	2	4	133,04	110,55	52,84	42,64	81,45	84,01	0	1
41	2	4	126,47	89,80	64,89	18,73	78,66	79,95	0	1
41	2	4	136,00	97,33	39,40	24,02	80,06	56,09	0	1
42	2	1	332,31	59,62	81,98	40,82	95,76	63,01	0	0
42	2	1	332,85	66,12	85,47	40,20	101,88	67,13	0	0
42	2	1	333,58	59,19	73,13	48,28	102,43	51,65	0	0
42	2	1	331,92	46,27	55,23	49,45	89,90	31,95	0	0
42	2	1	331,21	46,10	64,49	42,87	83,68	43,85	0	0
42	2	2	87,25	59,19	73,13	8,86	59,62	81,98	0	0
42	2	2	91,03	46,27	55,23	9,27	46,10	64,49	0	0
42	2	3	25,75	89,90	31,95	28,39	115,47	44,29	0	0
42	2	3	33,94	95,76	63,01	7,38	101,88	67,13	0	0
42	2	3	22,59	83,68	43,85	20,31	102,43	51,65	0	0
42	2	3	28,27	59,62	81,98	7,38	66,12	85,47	0	0
42	2	3	28,84	46,23	64,48	14,78	59,17	72,11	0	0
42	2	4	120,74	115,47	44,29	26,58	101,88	67,13	0	0
42	2	4	120,43	102,43	51,65	13,18	95,76	63,01	0	0
42	2	4	117,63	89,90	31,95	13,42	83,68	43,85	0	0
49	2	1	30,88	47,37	67,83	52,91	92,78	94,98	0	0
49	2	1	30,29	47,12	54,51	68,80	106,54	89,21	0	0
49	2	1	29,54	34,98	74,89	52,52	80,68	100,79	0	0
49	2	1	23,72	34,75	91,15	26,52	59,03	101,82	0	0
49	2	1	25,75	30,30	95,30	30,87	58,11	108,71	0	0
49	2	2	88,93	47,12	54,51	13,32	47,37	67,83	0	0
49	2	2	89,63	34,65	75,29	15,86	34,75	91,15	0	0
49	2	2	88,45	28,81	64,71	31,26	29,66	95,96	0	0
49	2	3	136,64	34,75	91,15	7,00	29,66	95,96	0	0
49	2	3	154,36	92,78	94,98	13,42	80,68	100,79	0	0
49	2	3	150,89	47,12	54,51	20,96	28,81	64,71	0	0
49	2	3	150,32	47,37	67,83	14,26	34,98	74,89	0	0
49	2	4	337,24	92,78	94,98	14,92	106,54	89,21	0	0
49	2	4	340,67	58,11	108,71	23,92	80,68	100,79	0	0
49	2	4	357,27	59,03	101,82	21,67	80,68	100,79	0	0
55	2	1	358,57	13,37	70,90	41,32	54,68	69,87	0	0
55	2	1	358,22	13,52	63,39	28,49	42,00	62,50	0	0
55	2	1	358,97	13,37	50,12	41,17	54,54	49,38	0	0
55	2	1	359,54	13,23	103,19	18,30	31,52	103,04	0	0
55	2	1	358,54	13,37	95,96	28,93	42,29	95,23	0	0
55	2	1	358,57	13,23	86,82	41,32	54,54	85,79	0	0
55	2	2	90,70	100,60	95,05	9,39	100,49	104,44	0	0
55	2	2	89,67	106,79	84,17	20,15	106,91	104,32	0	0
55	2	2	90,00	13,23	86,82	16,36	13,23	103,19	0	0
55	2	2	90,00	86,74	84,63	10,42	86,74	95,05	0	0
55	2	3	89,26	41,83	49,60	12,90	42,00	62,50	0	0
55	2	3	89,59	54,54	49,38	20,49	54,68	69,87	0	0
55	2	3	90,00	13,37	50,12	20,79	13,37	70,90	0	0
55	2	4	323,15	31,52	103,04	28,76	54,54	85,79	0	0
61	2	1	359,20	40,94	61,56	43,79	84,73	60,95	0	0
61	2	1	358,40	40,94	77,06	30,12	71,05	76,22	0	0

61	2	1	355,98	40,49	86,22	20,68	61,12	84,77	0	0
61	2	2	270,00	40,94	77,06	15,50	40,94	61,56	0	0
61	2	2	272,87	40,49	86,22	9,17	40,94	77,06	0	0
61	2	4	311,85	71,05	76,22	20,50	84,73	60,95	0	0
61	2	4	319,28	61,12	84,77	13,11	71,05	76,22	0	0
62	2	1	359,86	34,07	67,24	62,20	96,27	67,09	0	0
62	2	1	359,94	33,09	87,74	45,33	78,42	87,69	0	0
62	2	1	359,50	33,11	102,93	34,36	67,47	102,63	0	0
62	2	2	89,94	33,09	87,74	15,20	33,11	102,93	0	0
62	2	2	92,74	34,07	67,24	20,52	33,09	87,74	0	0
62	2	4	310,90	78,42	87,69	27,26	96,27	67,09	0	0
62	2	4	306,24	67,47	102,63	18,52	78,42	87,69	0	0
65	2	1	336,71	81,20	67,34	43,80	121,42	50,02	1	0
65	2	1	330,63	63,76	63,31	35,53	94,72	45,88	1	0
65	2	1	332,56	64,63	53,29	43,48	103,22	33,25	1	0
65	2	1	329,87	80,76	89,23	26,47	103,65	75,94	1	0
65	2	1	332,11	75,86	84,00	27,01	99,73	71,37	1	0
65	2	1	331,60	75,20	76,38	36,19	107,03	59,17	1	0
65	2	2	91,14	81,20	67,34	21,90	80,76	89,23	1	0
65	2	2	85,10	75,20	76,38	7,65	75,86	84,00	1	0
65	2	2	94,97	64,63	53,29	21,73	81,20	67,34	1	0
65	2	3	40,30	64,63	53,29	21,73	81,20	67,34	1	0
65	2	3	42,66	103,22	33,25	24,75	121,42	50,02	1	0
65	2	3	48,79	63,76	63,31	17,37	75,20	76,38	1	0
65	2	3	46,82	75,86	84,00	7,17	80,76	89,23	1	0
65	2	3	49,38	99,73	71,37	6,03	103,65	75,94	1	0
65	2	4	304,43	103,65	75,94	31,43	121,42	50,02	1	0
65	2	4	300,91	99,73	71,37	14,22	107,03	59,17	1	0
65	2	4	303,94	94,72	45,88	15,23	103,22	33,25	1	0
77	2	1	338,10	54,39	63,77	54,06	104,55	43,60	1	0
77	2	1	336,88	33,68	66,16	45,35	76,20	50,37	1	0
77	2	1	339,62	33,68	66,16	45,35	76,20	50,37	1	0
77	2	1	341,08	54,29	91,22	32,18	84,73	80,78	1	0
77	2	1	340,48	46,87	87,84	32,53	77,53	76,97	1	0
77	2	1	339,96	46,76	74,01	44,12	88,22	58,89	1	0
77	2	2	90,23	54,39	63,77	27,45	54,29	91,22	1	0

81	2	2	88,82	56,41	58,76	13,53	56,69	72,29	1	1
81	2	2	93,44	45,18	39,67	9,28	44,63	48,94	1	1
81	2	3	49,10	90,57	27,87	14,27	99,91	38,65	1	1
81	2	3	37,85	89,15	56,63	10,57	97,50	63,12	1	1
81	2	3	46,33	99,47	15,45	22,16	114,77	31,48	1	1
81	2	3	39,83	44,63	48,94	15,34	56,41	58,76	1	1
81	2	3	31,98	56,69	72,29	10,50	65,59	77,85	1	1
81	2	3	39,56	45,18	39,67	25,03	64,48	55,61	1	1
81	2	4	118,64	114,77	31,48	36,05	97,50	63,12	1	1
81	2	4	120,90	99,91	38,65	20,95	89,15	56,63	1	1
81	2	4	125,64	99,47	15,45	15,28	90,57	27,87	1	1
82	2	1	90,00	67,91	37,40	35,69	67,91	73,09	0	0
82	2	1	90,47	73,70	48,90	38,71	73,38	87,61	0	0
82	2	1	89,34	54,00	42,21	33,81	54,39	76,02	0	0
82	2	1	90,27	39,83	34,22	27,38	39,70	61,60	0	0
82	2	1	90,26	48,99	31,62	28,03	48,87	59,65	0	0
82	2	2	63,29	67,91	37,40	12,87	73,70	48,90	0	0
82	2	2	64,70	48,99	31,62	11,71	54,00	42,21	0	0
82	2	3	347,80	54,39	76,02	13,83	67,91	73,09	0	0
82	2	3	348,84	52,64	91,70	21,14	73,38	87,61	0	0
82	2	3	348,00	39,70	61,60	9,37	48,87	59,65	0	0
82	2	3	344,18	39,83	34,22	9,53	48,99	31,62	0	0
82	2	3	340,94	54,00	42,21	14,72	67,91	37,40	0	0
82	2	4	69,37	67,91	73,09	15,51	73,38	87,61	0	0
82	2	4	71,35	48,87	59,65	17,28	54,39	76,02	0	0
82	2	4	66,74	39,70	61,60	32,77	52,64	91,70	0	0
83	2	1	337,10	86,63	37,03	32,26	116,35	24,47	0	0
83	2	1	335,54	86,60	27,96	51,58	133,55	6,61	0	0
83	2	1	338,15	95,28	48,13	31,20	124,23	36,52	0	0
83	2	1	340,58	99,29	65,29	20,66	118,77	58,42	0	0
83	2	1	340,53	94,70	61,57	22,34	115,76	54,13	0	0
83	2	2	89,79	86,60	27,96	9,06	86,63	37,03	0	0
83	2	2	92,43	95,28	48,13	13,45	94,70	61,57	0	0
83	2	3	56,81	116,35	24,47	14,39	124,23	36,52	0	0
83	2	3	56,42	133,55	6,61	16,90	142,89	20,68	0	0
83	2	3	54,99	115,76	54,13	5,24	118,77	58,42	0	0
83	2	3	52,11	86,63	37,03	14,07	95,28	48,13	0	0
83	2	3	39,07	94,70	61,57	5,90	99,29	65,29	0	0
83	2	4	122,58	142,89	20,68	44,79	118,77	58,42	0	0
83	2	4	115,69	124,23	36,52	19,54	115,76	54,13	0	0
83	2	4	133,90	133,55	6,61	24,80	116,35	24,47	0	0
85	2	1	331,96	32,02	69,14	43,83	70,71	48,53	1	1
85	2	1	332,27	32,11	52,84	54,56	80,41	27,45	1	1
85	2	1	331,74	57,66	64,49	53,50	104,79	39,15	1	1
85	2	1	336,48	58,63	100,38	31,82	87,81	87,69	1	1
85	2	1	336,25	50,81	96,19	31,60	79,73	83,46	1	1
85	2	1	332,71	49,99	76,29	43,94	89,04	56,14	1	1
85	2	2	88,46	57,66	64,49	35,91	58,63	100,38	1	1
85	2	2	87,63	49,99	76,29	19,92	50,81	96,19	1	1
85	2	2	90,32	32,11	52,84	16,30	32,02	69,14	1	1
85	2	3	22,52	70,71	48,53	19,85	89,04	56,14	1	1
85	2	3	25,64	80,41	27,45	27,04	104,79	39,15	1	1
85	2	3	24,51	32,11	52,84	28,08	57,66	64,49	1	1
85	2	3	21,68	32,02	69,14	19,33	49,99	76,29	1	1
85	2	3	28,22	50,81	96,19	8,87	58,63	100,38	1	1
85	2	3	27,60	79,73	83,46	9,11	87,81	87,69	1	1
85	2	4	108,30	103,67	39,74	50,51	87,81	87,69	1	1
85	2	4	107,61	89,04	56,14	28,28	80,49	83,09	1	1
85	2	4	112,45	79,09	28,23	21,97	70,71	48,53	1	1
95	2	1	92,46	78,45	36,54	37,28	76,85	73,79	0	0
95	2	1	91,98	89,47	41,84	54,20	87,60	96,01	0	0
95	2	1	90,54	59,56	45,27	36,21	59,22	81,47	0	0
95	2	1	94,14	44,83	35,96	28,16	42,80	64,04	0	0
95	2	1	95,82	50,93	33,93	28,40	48,05	62,18	0	0
95	2	2	30,64	79,74	36,08	11,32	89,47	41,84	0	0
95	2	2	52,70	50,93	33,93	14,25	59,56	45,27	0	0
95	2	3	336,46	59,22	81,47	19,23	76,85	73,79	0	0
95	2	3	340,36	68,79	102,72	19,97	87,60	96,01	0	0
95	2	3	340,48	42,80	64,04	5,57	48,05	62,18	0	0
95	2	3	341,58	44,83	35,96	6,43	50,93	33,93	0	0
95	2	3	335,22	59,56	45,27	20,81	78,45	36,54	0	0
95	2	4	64,19	76,85	73,79	24,68	87,60	96,01	0	0
95	2	4	59,91	48,05	62,18	22,29	59,22	81,47	0	0

95	2	4	56,09	42,80	64,04	46,60	68,79	102,72	0	0
103	2	1	0,55	55,32	45,39	73,62	128,94	46,10	0	0
103	2	1	354,26	59,92	89,36	40,08	99,80	85,35	0	0
103	2	1	1,05	63,11	54,00	51,33	114,42	54,94	0	0
103	2	1	354,57	65,94	80,28	33,66	99,44	77,10	0	0
103	2	1	1,06	54,26	67,79	57,23	111,48	68,85	0	0
103	2	2	48,02	41,05	68,38	28,22	59,92	89,36	0	0
103	2	2	46,93	54,26	67,79	17,10	65,94	80,28	0	0
103	2	2	47,86	55,32	45,39	11,60	63,11	54,00	0	0
103	2	3	101,97	114,42	54,94	14,22	111,48	68,85	0	0
103	2	3	100,07	128,94	46,10	29,69	123,74	75,33	0	0
103	2	3	87,54	99,44	77,10	8,26	99,80	85,35	0	0
103	2	3	123,54	65,94	80,28	10,89	59,92	89,36	0	0
103	2	3	122,68	63,11	54,00	16,39	54,26	67,79	0	0
103	2	3	121,84	55,32	45,39	27,06	41,05	68,38	0	0
103	2	4	157,30	123,74	75,33	25,96	99,80	85,35	0	0
103	2	4	145,56	111,48	68,85	14,59	99,44	77,10	0	0
103	2	4	148,65	128,94	46,10	16,99	114,42	54,94	0	0
105	2	1	339,03	68,68	81,80	36,90	103,14	68,60	0	1
105	2	1	340,99	52,51	43,68	53,55	103,14	68,60	0	1
105	2	1	341,07	63,01	76,70	36,62	97,64	64,82	0	1
105	2	1	340,42	52,43	56,30	42,46	92,43	42,07	0	1
105	2	1	339,66	62,70	66,11	43,82	103,79	50,87	0	1
105	2	2	88,34	62,70	66,11	10,59	63,01	76,70	0	1
105	2	2	90,38	52,51	43,68	12,62	52,43	56,30	0	1
105	2	3	37,78	92,43	42,07	14,37	103,79	50,87	0	1
105	2	3	32,82	103,14	26,24	21,83	121,49	38,07	0	1
105	2	3	34,51	97,64	64,82	6,67	103,14	68,60	0	1
105	2	3	43,69	52,43	56,30	14,20	62,70	66,11	0	1
105	2	3	42,00	63,01	76,70	7,63	68,68	81,80	0	1
105	2	4	121,01	121,49	38,07	35,61	103,14	68,60	0	1
105	2	4	116,37	103,79	50,87	14,83	97,20	64,16	0	1
105	2	4	128,43	103,14	26,24	19,05	91,30	41,17	0	1
109	2	1	178,29	95,23	69,33	38,73	56,52	70,48	0	0
109	2	1	179,02	95,04	74,71	33,90	61,14	75,29	0	0
109	2	1	179,05	102,55	62,21	46,23	56,33	62,98</td		

115	2	3	30,42	34,09	55,34	15,87	47,78	63,38	0	0
115	2	3	14,46	47,36	69,87	9,03	56,11	72,12	0	0
115	2	4	127,76	91,95	44,91	26,04	76,00	65,49	0	0
115	2	4	130,26	78,68	53,51	12,01	70,92	62,67	0	0
115	2	4	126,89	77,13	31,52	16,92	66,97	45,05	0	0
118	2	1	314,34	34,95	73,66	50,27	70,08	37,71	0	0
118	2	1	312,65	35,65	62,10	60,19	76,43	17,83	0	0
118	2	1	311,83	53,01	81,70	50,14	86,45	44,33	0	0
118	2	1	313,17	58,51	94,67	43,11	88,00	63,23	0	0
118	2	1	312,42	52,87	91,28	41,63	80,95	60,55	0	0
118	2	2	90,84	53,01	81,70	9,59	52,87	91,28	0	0
118	2	2	93,49	35,65	62,10	11,58	34,95	73,66	0	0
118	2	3	22,04	70,08	37,71	17,66	86,45	44,33	0	0
118	2	3	23,63	76,43	17,83	28,49	102,54	29,25	0	0
118	2	3	20,79	80,95	60,55	7,55	88,00	63,23	0	0
118	2	3	23,99	34,95	73,66	19,77	53,01	81,70	0	0
118	2	3	24,32	52,59	91,99	6,50	58,51	94,67	0	0
118	2	4	113,16	102,54	29,25	36,96	88,00	63,23	0	0
118	2	4	108,75	86,45	44,33	17,12	80,95	60,55	0	0
118	2	4	107,71	76,43	17,83	20,87	70,08	37,71	0	0
120	2	1	269,77	80,69	59,56	20,91	80,61	38,65	0	0
120	2	1	269,44	86,55	83,07	28,12	86,28	54,95	0	0
120	2	1	269,05	62,14	86,67	37,79	61,52	48,89	0	0
120	2	1	268,44	75,95	55,79	23,27	75,32	32,53	0	0
120	2	2	305,12	61,52	48,89	21,49	73,88	31,31	0	0
120	2	3	218,52	80,69	59,56	6,05	75,95	55,79	0	0
120	2	3	210,47	78,96	96,57	19,51	62,14	86,67	0	0
120	2	3	211,38	86,55	83,07	16,18	72,74	74,64	0	0
120	2	3	229,17	80,61	38,65	8,09	75,32	32,53	0	0
120	2	3	221,35	86,28	54,95	7,23	80,85	50,17	0	0
120	2	4	299,33	78,96	96,57	15,49	86,55	83,07	0	0
120	2	4	297,79	72,74	74,64	17,05	80,69	59,56	0	0
120	2	4	294,09	62,14	86,67	33,83	75,95	55,79	0	0
123	2	1	2,83	40,13	57,36	31,05	71,14	58,90	0	0
123	2	1	3,02	39,91	64,48	31,16	71,04	66,12	0	0
123	2	1	0,69	40,37	50,37	44,26	84,62	50,90	0	0
123	2	1	1,83	41,22	25,18	59,08	100,27	27,07	0	0
123	2	1	1,83	40,88	34,38	44,20	85,06	35,79	0	0
123	2	2	91,92	40,37	50,37	7,00	40,13	57,36	0	0
123	2	2	92,11	41,22	25,18	9,20	40,88	34,38	0	0
123	2	3	91,66	85,06	35,79	15,12	84,62	50,90	0	0
123	2	3	93,30	100,27	27,07	23,89	98,89	50,93	0	0
123	2	3	90,87	71,14	58,90	7,23	71,04	66,12	0	0
123	2	3	91,85	40,88	34,38	16,00	40,37	50,37	0	0
123	2	3	91,76	40,13	57,36	7,12	39,91	64,48	0	0
123	2	4	148,39	99,19	27,10	16,58	85,06	35,79	0	0
123	2	4	149,33	84,62	50,90	15,67	71,14	58,90	0	0
123	2	4	151,39	98,89	50,93	31,73	71,04	66,12	0	0
132	2	1	25,41	46,11	81,39	23,71	67,53	91,56	0	0
132	2	1	21,48	39,76	86,03	25,32	63,33	95,30	0	0
132	2	1	23,26	44,20	65,00	36,70	77,91	79,49	0	0
132	2	1	25,25	52,22	38,10	68,04	113,76	67,12	0	0
132	2	1	23,04	55,33	56,39	34,41	86,99	69,86	0	0
132	2	2	82,99	35,78	53,65	32,63	39,76	86,03	0	0
132	2	2	83,34	44,20	65,00	16,50	46,11	81,39	0	0
132	2	2	80,35	52,22	38,10	18,55	55,33	56,39	0	0
132	2	3	138,31	67,53	91,56	5,62	63,33	95,30	0	0
132	2	3	141,40	88,07	71,39	12,99	77,91	79,49	0	0
132	2	3	139,92	114,20	69,37	15,95	101,99	79,64	0	0
132	2	3	136,60	52,22	38,10	22,62	35,78	53,65	0	0
132	2	3	140,24	55,33	56,39	12,30	45,87	64,26	0	0
132	2	3	143,84	46,11	81,39	7,86	39,76	86,03	0	0
132	2	4	130,71	77,91	79,49	15,92	67,53	91,56	0	0
132	2	4	175,58	114,20	69,37	26,21	88,07	71,39	0	0
132	2	4	171,67	101,99	79,64	27,95	74,34	83,69	0	0
137	2	1	359,00	48,32	54,87	36,27	84,59	54,24	0	0
137	2	1	359,68	48,41	44,12	50,14	98,55	43,84	0	0
137	2	1	358,99	58,34	63,30	35,96	94,29	62,66	0	0
137	2	1	359,80	62,60	78,75	25,70	88,30	78,66	0	0
137	2	1	358,78	58,33	76,29	25,62	83,95	75,74	0	0
137	2	2	90,47	48,41	44,12	10,76	48,32	54,87	0	0
137	2	2	90,03	58,34	63,30	12,99	58,33	76,29	0	0
137	2	3	40,98	84,59	54,24	12,85	94,29	62,66	0	0

137	2	3	47,42	98,55	43,84	17,24	110,22	56,54	0	0
137	2	3	36,59	83,52	75,11	5,96	88,30	78,66	0	0
137	2	3	30,01	58,33	76,29	4,93	62,60	78,75	0	0
137	2	3	40,07	48,32	54,87	13,09	58,34	63,30	0	0
137	2	4	134,73	110,22	56,54	31,14	88,30	78,66	0	0
137	2	4	130,87	94,29	62,66	16,46	83,52	75,11	0	0
137	2	4	143,32	98,55	43,84	17,41	84,59	54,24	0	0
140	2	1	35,97	60,25	47,17	42,27	94,46	72,00	0	0
140	2	1	35,85	60,23	37,08	55,14	104,93	69,37	0	0
140	2	1	36,35	49,22	59,34	43,00	83,85	84,83	0	0
140	2	1	34,75	44,63	78,27	24,21	64,52	92,06	0	0
140	2	1	37,72	50,81	72,72	23,54	69,43	87,12	0	0
140	2	2	87,35	43,63	56,75	21,54	44,63	78,27	0	0
140	2	2	89,86	60,23	37,08	10,09	60,25	47,17	0	0
140	2	2	83,21	49,22	59,34	13,48	50,81	72,72	0	0
140	2	3	134,84	69,43	87,12	6,97	64,52	92,06	0	0
140	2	3	129,60	94,46	72,00	16,66	83,85	84,83	0	0
140	2	3	128,75	103,57	70,50	23,07	89,13	88,49	0	0
140	2	3	130,15	60,23	37,08	25,74	43,63	56,75	0	0
140	2	3	132,19	60,25	47,17	16,43	49,22	59,34	0	0
140	2	3	138,14	50,81	72,72	8,31	44,63	78,27	0	0
140	2	4	170,68	103,57	70,50	9,22	94,46	72,00	0	0
140	2	4	170,96	83,85	84,83	14,59	69,43	87,12	0	0
140	2	4	171,75	89,13	88,49	24,86	64,52	92,06	0	0
142	2	1	355,94	84,75	68,04	28,48	113,16	66,02	0	0
142	2	1	1,60	83,32	30,62	18,85	102,16	31,14	0	0
142	2	1	341,75	56,27	87,09	24,12	79,18	79,53	0	0
142	2	1	347,25	37,74	62,79	26,42	63,51	56,96	0	0
142	2	1	356,99	69,10	44,61	30,24	99,30	43,02	0	0
142	2	2	103,54	102,16	31,14	12,22	99,30	43,02	0	0
142	2	2	98,56	115,51	50,39	15,81	113,16	66,02	0	0
142	2	2	115,87	84,75	68,04	12,78	79,18	79,53	0	0
142	2	2	107,83	41,09	52,37	10,95	37,74	62,79	0	0
142	2	2	114,35	69,10	44,61	13,55	63,51	56,96	0	0
142	2	3	58,93	99,30	43,02	26,86	113,16	66,02	0	0
142	2	3	55,25</							

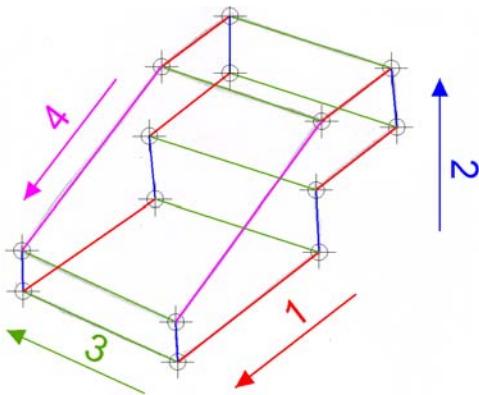


Table 4: Exported data from CAD application (model 3)

F	M	D	Ang	Ini X	Ini Y	Len	End X	End Y	H	A
4	3	1	353,84	92,51	53,98	25,08	117,44	51,29	1	0
4	3	1	353,96	84,51	69,72	25,20	109,57	67,06	1	0
4	3	1	357,47	29,65	25,65	52,91	82,51	23,31	1	0
4	3	1	356,92	84,19	43,44	33,19	117,33	41,65	1	0
4	3	2	85,22	82,51	23,31	20,19	84,19	43,44	1	0
4	3	2	89,35	117,33	41,65	9,64	117,44	51,29	1	0
4	3	2	80,13	22,09	37,86	10,44	23,89	48,15	1	0
4	3	2	87,02	29,65	25,65	9,63	30,15	35,26	1	0
4	3	3	296,94	84,51	69,72	17,65	92,51	53,98	1	0
4	3	3	296,51	109,57	67,06	17,63	117,44	51,29	1	0
4	3	3	301,76	22,09	37,86	14,36	29,65	25,65	1	0
4	3	3	295,94	23,89	48,15	14,33	30,15	35,26	1	0
4	3	4	16,71	30,15	35,26	65,10	92,51	53,98	1	0
4	3	4	19,59	23,89	48,15	64,35	84,51	69,72	1	0
6	3	1	1,92	90,77	78,62	18,83	109,59	79,25	0	0
6	3	1	1,48	74,11	85,65	18,39	92,49	86,13	0	0
6	3	1	8,53	43,33	43,24	45,13	87,96	49,93	0	0
6	3	1	5,04	91,31	69,86	17,24	108,48	71,38	0	0
6	3	2	80,47	87,96	49,93	20,21	91,31	69,86	0	0
6	3	2	81,97	108,48	71,38	7,95	109,59	79,25	0	0
6	3	2	90,00	18,51	58,42	5,11	18,51	63,53	0	0
6	3	2	87,62	43,33	43,24	8,49	43,68	51,72	0	0
6	3	3	337,10	74,11	85,65	18,08	90,77	78,62	0	0
6	3	3	338,07	92,49	86,13	18,43	109,59	79,25	0	0
6	3	3	328,54	18,51	58,42	29,09	43,33	43,24	0	0
6	3	3	334,87	18,51	63,53	27,80	43,68	51,72	0	0
6	3	4	29,74	43,68	51,72	54,23	90,77	78,62	0	0
6	3	4	21,70	18,51	63,53	59,84	74,11	85,65	0	0
9	3	1	359,33	90,84	63,41	16,78	107,61	63,21	0	0
9	3	1	5,16	70,99	34,28	26,66	97,54	36,68	0	0
9	3	1	1,87	74,30	43,39	22,39	96,68	44,12	0	0
9	3	1	350,04	46,14	86,66	39,55	85,09	79,82	0	0
9	3	1	348,32	29,68	68,75	40,13	68,98	60,63	0	0
9	3	2	107,16	74,30	43,39	18,04	68,98	60,63	0	0
9	3	2	104,49	89,58	62,44	17,96	85,09	79,82	0	0
9	3	2	92,40	108,10	51,57	11,65	107,61	63,21	0	0
9	3	2	97,57	31,19	57,38	11,47	29,68	68,75	0	0
9	3	2	96,63	97,54	36,68	7,50	96,68	44,12	0	0
9	3	3	58,19	95,84	44,23	22,34	107,61	63,21	0	0
9	3	3	54,66	97,54	36,68	18,26	108,10	51,57	0	0
9	3	3	51,25	74,30	43,39	24,42	89,58	62,44	0	0
9	3	3	47,42	29,68	68,75	24,32	46,14	86,66	0	0
9	3	3	49,98	68,98	60,63	25,06	85,09	79,82	0	0
9	3	4	329,87	31,19	57,38	46,02	70,99	34,28	0	0
11	3	1	222,06	46,44	58,93	12,79	36,94	50,37	0	1
11	3	1	218,52	65,66	89,15	39,65	34,64	64,46	0	1
11	3	1	221,66	54,24	55,94	13,66	44,04	46,86	0	1
11	3	1	221,12	54,97	37,98	16,74	42,36	26,97	0	1
11	3	2	332,18	35,74	30,46	7,48	42,36	26,97	0	1
11	3	2	337,25	34,54	43,82	2,23	36,60	42,96	0	1
11	3	2	333,75	36,94	50,37	7,92	44,04	46,86	0	1
11	3	2	345,41	65,66	89,15	7,39	72,81	87,29	0	1
11	3	2	334,90	34,64	64,46	13,03	46,44	58,93	0	1

11	3	3	86,55	35,74	30,46	19,94	36,94	50,37	0	1
11	3	3	89,74	34,54	43,82	20,64	34,64	64,46	0	1
11	3	3	85,16	42,36	26,97	19,96	44,04	46,86	0	1
11	3	3	89,47	72,62	66,03	21,27	72,81	87,29	0	1
11	3	3	92,31	54,97	37,98	17,98	54,24	55,94	0	1
11	3	4	237,82	72,62	66,03	33,14	54,97	37,98	0	1
11	3	4	239,36	72,81	87,29	36,44	54,24	55,94	0	1
14	3	1	332,89	63,30	66,95	15,73	77,31	59,78	0	1
14	3	1	329,18	86,71	79,85	13,34	98,17	73,02	0	1
14	3	1	328,22	39,75	58,66	30,22	65,43	42,75	0	1
14	3	1	330,46	64,94	57,71	15,23	78,19	50,20	0	1
14	3	2	95,24	78,19	50,20	9,62	77,31	59,78	0	1
14	3	2	89,89	98,15	62,38	10,64	98,17	73,02	0	1
14	3	2	90,00	39,75	58,66	7,88	39,75	66,54	0	1
14	3	2	91,91	65,43	42,75	14,97	64,94	57,71	0	1
14	3	3	208,87	86,71	79,85	26,73	63,30	66,95	0	1
14	3	3	204,61	65,86	78,50	28,73	39,75	66,54	0	1
14	3	3	212,41	98,17	73,02	24,71	77,31	59,78	0	1
14	3	3	210,33	76,39	51,04	14,49	63,89	43,73	0	1
14	3	3	211,39	98,15	62,38	23,38	78,19	50,20	0	1
14	3	4	3,70	65,86	78,50	20,89	86,71	79,85	0	1
14	3	4	0,99	39,75	66,54	23,56	63,30	66,95	0	1
16	3	1	186,40	80,96	53,22	22,10	59,00	50,76	0	1
16	3	1	183,24	54,77	72,51	19,24	35,56	71,43	0	1
16	3	1	186,21	81,01	59,98	22,75	58,40	57,52	0	1
16	3	1	190,12	92,32	92,21	31,73	61,08	86,63	0	1
16	3	1	193,14	123,23	81,06	35,69	88,48	72,95	0	1
16	3	2	285,33	35,56	71,43	6,31	37,23	65,34	0	1
16	3	2	275,12	58,40	57,52	6,79	59,00	50,76	0	1
16	3	2	245,94	61,08	86,63	15,47	54,77	72,51	0	1
16	3	2	257,68	123,23	81,06	10,83	120,92	70,48	0	1
16	3	2	247,56	88,48	72,95	14,81	82,82	59,26	0	1
16	3	3	328,66	35,56	71,43	26,73	58,40	57,52	0	1
16	3	3	326,18	37,23	65,34	26,21	59,00	50,76	0	1
16	3	3	334,48	54,77	72,51	29,08	81,01	59,98	0	1
16	3	3	340,16	92,32	92,21	32,86	123,23	81,06	0	1
16	3	3	335,53	61,08	86,63	32,17	90,36	73,31	0	1
16	3	4	23,36	80,96	53,22	43,52	120,92	70,48	0	1
20	3	1	167,59	50,34	63,49	24,70	26,22	68,80	0	0
20	3	1	168,50	71,59	79,20	24,93	47,16	84,17	0	0
20	3	1	168,82	82,84	31,33	34,13	49,35	37,94	0	0
20	3	1	169,88	48,90	54,43	23,16	26,10	58,50	0	0
20	3	2	95,49	82,84	31,33	9,53	81,93	40,81	0	0
20	3	2	93,84	103,75	43,57	10,80	103,02	54,34	0	0
20	3	2	89,33	26,10	58,50	10,29	26,22	68,80	0	0
20	3	2	91,58	49,35	37,94	16,50	48,90	54,43	0	0
20	3	3	36,48	50,34	63,49	26,43	71,59	79,20	0	0
20	3	3	36,29	26,22	68,80	25,98	47,16	84,17	0	0
20	3	3	30,35	82,84	31,33	24,23	103,75	43,57	0	0
20	3	3	32,67	81,93	40,81	25,06	103,02	54,34	0	0
20	3	4	141,65	103,02	54,34	40,08	71,59	79,20	0	0
20	3	4	144,33	81,93	40,81	38,89	50,34	63,49	0	0
22	3	1	359,63	38,97	85,91	25,10	64,07	85,74	0	0
22	3	1	356,30	55,91	95,02	22,49	78,35	93,57	0	0
22	3	1	359,72	61,71	62,70	41,65	103,36	62,4		

23	3	2	85,64	94,15	14,81	26,68	96,18	41,42	0	0
23	3	3	54,88	96,69	48,47	24,67	110,89	68,65	0	0
23	3	3	51,22	41,23	45,05	25,87	57,43	65,21	0	0
23	3	3	64,49	122,56	41,81	23,86	132,84	63,35	0	0
23	3	3	52,57	94,15	14,81	28,59	111,53	37,52	0	0
23	3	3	64,03	122,27	34,19	24,19	132,87	55,93	0	0
23	3	4	3,68	57,43	65,21	53,57	110,89	68,65	0	0
23	3	4	3,54	41,23	45,05	55,57	96,69	48,47	0	0
28	3	1	11,53	51,65	75,39	28,04	79,12	81,00	1	0
28	3	1	10,12	29,30	87,82	28,65	57,50	92,85	1	0
28	3	1	9,08	29,05	81,16	28,31	57,01	85,62	1	0
28	3	1	10,98	74,24	48,76	44,79	118,21	57,28	1	0
28	3	1	11,82	55,30	61,91	40,44	94,89	70,19	1	0
28	3	1	10,06	51,40	67,43	26,50	77,49	72,06	1	0
28	3	2	89,70	94,89	70,19	15,67	94,97	85,87	1	0
28	3	2	85,48	55,30	61,91	6,19	55,79	68,08	1	0
28	3	2	85,88	55,30	61,91	23,77	57,01	85,62	1	0
28	3	2	86,80	118,21	57,28	14,56	119,03	71,82	1	0
28	3	2	87,90	29,05	81,16	6,66	29,30	87,82	1	0
28	3	2	88,25	51,40	67,43	7,96	51,65	75,39	1	0
28	3	2	82,06	74,24	48,76	23,53	77,49	72,06	1	0
28	3	3	329,72	94,97	85,87	27,86	119,03	71,82	1	0
28	3	3	331,03	94,89	70,19	26,66	118,21	57,28	1	0
28	3	3	325,21	55,30	61,91	23,06	74,24	48,76	1	0
28	3	3	328,45	29,05	81,16	26,23	51,40	67,43	1	0
28	3	3	330,93	29,30	87,82	25,57	51,65	75,39	1	0
28	3	3	331,26	57,50	92,85	24,66	79,12	81,00	1	0
29	3	1	2,71	22,19	88,83	22,93	45,10	89,92	1	0
29	3	1	354,38	21,55	82,91	18,48	39,94	81,10	1	0
29	3	1	359,95	39,96	68,98	45,32	85,29	68,94	1	0
29	3	1	2,86	59,74	58,69	32,52	92,22	60,31	1	0
29	3	1	358,50	42,61	75,54	17,41	60,01	75,08	1	0
29	3	1	2,92	43,43	81,37	16,16	59,57	82,19	1	0
29	3	2	92,93	92,22	60,31	9,70	91,73	70,01	1	0
29	3	2	88,90	85,29	68,94	7,36	85,43	76,30	1	0
29	3	2	81,99	42,61	75,54	5,89	43,43	81,37	1	0
29	3	2	89,04	59,74	58,69	16,39	60,01	75,08	1	0
29	3	2	83,85	21,55	82,91	5,95	22,19	88,83	1	0
29	3	2	90,51	39,96	68,98	7,34	39,90	76,32	1	0
29	3	2	90,10	39,96	68,98	12,12	39,94	81,10	1	0
29	3	3	308,80	85,29	68,94	11,07	92,22	60,31	1	0
29	3	3	332,51	39,96	68,98	22,29	59,74	58,69	1	0
29	3	3	163,30	60,01	75,08	20,96	39,94	81,10	1	0
29	3	3	315,02	85,43	76,30	8,91	91,73	70,01	1	0
29	3	3	340,22	21,55	82,91	19,50	39,90	76,32	1	0
29	3	3	340,63	22,19	88,83	22,51	43,43	81,37	1	0
29	3	3	331,89	45,10	89,92	16,41	59,57	82,19	1	0
29	3	4	161,34	85,43	76,30	42,57	45,10	89,92	1	0
29	3	4	159,25	91,73	70,01	34,39	59,57	82,19	1	0
31	3	1	33,58	30,80	57,69	21,16	48,42	69,39	0	0
31	3	1	39,36	19,43	62,67	20,10	34,97	75,41	0	0
31	3	1	34,88	74,75	57,92	36,47	104,66	78,77	0	0
31	3	1	32,42	36,71	49,92	35,44	66,63	68,93	0	0
31	3	2	126,41	74,75	57,92	13,68	66,63	68,93	0	0
31	3	2	136,91	104,66	78,77	7,46	99,21	83,87	0	0
31	3	2	145,95	99,19	87,83	5,15	94,92	90,71	0	0
31	3	2	116,87	24,07	53,52	10,26	19,43	62,67	0	0
31	3	2	127,30	36,71	49,92	9,76	30,80	57,69	0	0
31	3	2	126,55	58,40	61,28	2,18	57,10	63,03	0	0
31	3	3	168,39	74,75	57,92	16,69	58,40	61,28	0	0
31	3	3	121,17	104,66	78,77	10,58	99,19	87,83	0	0
31	3	3	122,11	99,21	83,87	8,07	94,92	90,71	0	0
31	3	3	164,14	36,71	49,92	13,14	24,07	53,52	0	0
31	3	3	156,33	30,80	57,69	12,41	19,43	62,67	0	0
31	3	3	155,87	48,42	69,39	14,74	34,97	75,41	0	0
31	3	4	15,92	48,42	69,39	52,82	99,21	83,87	0	0
31	3	4	14,31	34,97	75,41	61,87	94,92	90,71	0	0
32	3	1	37,32	99,81	76,34	15,96	112,51	86,01	0	0
32	3	1	36,63	70,60	86,29	15,54	83,07	95,57	0	0
32	3	1	37,80	73,52	32,46	32,70	99,36	52,50	0	0
32	3	1	38,00	98,79	63,75	18,69	113,52	75,26	0	0
32	3	2	92,88	99,36	52,50	11,26	98,79	63,75	0	0
32	3	2	95,38	113,52	75,26	10,80	112,51	86,01	0	0

32	3	2	91,69	45,33	45,39	7,39	45,12	52,77	0	0
32	3	2	92,77	73,52	32,46	7,29	73,17	39,74	0	0
32	3	3	341,18	70,60	86,29	30,86	99,81	76,34	0	0
32	3	3	342,03	83,07	95,57	30,95	112,51	86,01	0	0
32	3	3	335,36	45,33	45,39	31,01	73,52	32,46	0	0
32	3	3	335,08	45,12	52,77	30,93	73,17	39,74	0	0
32	3	4	53,95	73,17	39,74	45,27	99,81	76,34	0	0
32	3	4	52,76	45,12	52,77	42,10	70,60	86,29	0	0
35	3	1	355,96	95,53	50,72	19,60	115,08	49,33	0	0
35	3	1	359,91	105,02	62,91	20,82	125,85	62,87	0	0
35	3	1	0,00	41,49	21,97	41,22	82,71	21,97	0	0
35	3	1	357,68	83,18	41,13	31,84	114,99	39,84	0	0
35	3	2	89,44	114,99	39,84	9,49	115,08	49,33	0	0
35	3	2	91,59	126,14	52,16	10,71	125,85	62,87	0	0
35	3	2	90,69	92,49	34,87	5,93	92,42	40,80	0	0
35	3	2	87,19	41,49	21,97	9,41	41,95	31,37	0	0
35	3	2	88,62	82,71	21,97	19,17	83,18	41,13	0	0
35	3	3	52,10	95,53	50,72	15,45	105,02	62,91	0	0
35	3	3	45,58	41,95	31,37	18,71	55,05	44,73	0	0
35	3	3	51,52	115,08	49,33	17,30	125,85	62,87	0	0
35	3	3	52,85	82,71	21,97	16,19	92,49	34,87	0	0
35	3	4	19,99	55,05	44,73	5,31	105,02	62,91	0	0
35	3	4	19,86	41,95	31,37	5,67	95,53	50,72	0	0
38	3	1	26,99	47,78	48,80	16,92	65,20	17,65	63,51	73,21
38	3	1	31,12	29,54	73,75	15,10	42,47	81,55	0	0
38	3	1	23,47	62,45	59,06	30,11	90,07	71,05	0	0
38	3	1	28,96	48,80	58,56	14,46	61,46	65,56	0	0
38	3	2	111,55	90,07	71,05	2,59	89,12	73,45	0	0
38	3	2	90,77	29,63	66,92	6,83	29,54	73,75	0	0
38	3	2	98,72	48,80	58,56	6,72	47,78	65,20	0	0
38	3	2	98,67	62,45	59,06	6,58	61,46	65,56	0	0
38	3	3	340,40	54,75	61,80	8,18	62,45	59,06	0	0
38	3	3	341,26	64,00	82,14	24,92	87,60	74,14	0	0
38	3	3	336,45	29,63	66,92	20,92	48,80	58,56	0	0
38	3	3	334,90	29,54	73,75	20,15	47,78	65,20	0	0
38	3	4	2,20	63,51	73,21	24,10	87,60	74,14	0	0
38	3	4	1,57	42,47	81,55	21,5				

44	3	3	339,44	78,84	92,06	22,05	99,49	84,32	0	0
44	3	3	332,48	59,22	53,99	25,38	81,73	42,27	0	0
44	3	3	334,14	45,15	29,27	28,68	70,96	16,76	0	0
44	3	3	335,33	45,15	35,51	27,90	70,51	23,87	0	0
44	3	4	68,67	84,38	34,48	43,49	100,20	74,99	0	0
45	3	1	89,77	62,84	81,51	10,36	62,88	91,87	1	0
45	3	1	87,61	60,70	85,09	8,16	61,04	93,25	1	0
45	3	1	88,01	50,42	77,88	7,72	50,69	85,60	1	0
45	3	1	59,49	56,61	58,18	11,17	62,28	67,80	1	0
45	3	1	57,66	64,87	65,32	12,54	71,58	75,92	1	0
45	3	1	92,00	53,32	73,55	10,93	52,94	84,48	1	0
45	3	2	153,53	52,94	84,48	2,51	50,69	85,60	1	0
45	3	2	143,16	62,88	91,87	2,30	61,04	93,25	1	0
45	3	2	325,48	62,28	67,10	3,14	64,87	65,32	1	0
45	3	2	147,20	56,61	58,18	2,89	54,18	59,74	1	0
45	3	2	147,31	62,28	67,80	10,64	53,32	73,55	1	0
45	3	2	147,39	71,58	75,92	10,05	63,11	81,33	1	0
45	3	3	36,49	50,69	85,60	12,87	61,04	93,25	1	0
45	3	3	32,30	50,46	78,62	12,12	60,70	85,09	1	0
45	3	3	42,25	54,18	59,74	10,95	62,28	67,10	1	0
45	3	3	36,64	52,94	84,48	12,39	62,88	91,87	1	0
45	3	3	40,84	56,61	58,18	10,93	64,87	65,32	1	0
45	3	3	41,10	62,28	67,80	12,35	71,58	75,92	1	0
45	3	3	38,49	53,32	73,55	12,51	63,11	81,33	1	0
45	3	4	275,22	60,70	85,09	17,36	62,28	67,80	1	0
45	3	4	281,69	50,42	77,88	18,52	54,18	59,74	1	0
46	3	1	88,76	88,70	73,66	25,47	89,25	99,13	1	0
46	3	1	89,29	75,66	67,68	23,73	75,95	91,41	1	0
46	3	1	89,69	85,00	76,41	25,85	85,14	102,26	1	0
46	3	1	83,46	89,87	39,20	17,01	91,80	56,10	1	0
46	3	1	85,98	98,72	51,34	15,44	99,80	66,75	1	0
46	3	1	91,93	80,78	64,10	24,54	79,95	88,62	1	0
46	3	2	148,08	99,80	66,75	13,08	88,70	73,66	1	0
46	3	2	153,25	98,72	51,34	4,65	94,57	53,43	1	0
46	3	2	149,88	89,87	39,20	4,63	85,86	41,52	1	0
46	3	2	145,20	79,95	88,62	4,88	75,95	91,41	1	0
46	3	2	142,71	89,25	99,13	5,17	85,14	102,26	1	0
46	3	2	144,04	91,80	56,10	13,62	80,78	64,10	1	0
46	3	3	43,03	75,66	67,68	12,78	85,00	76,41	1	0
46	3	3	48,49	79,95	88,62	14,03	89,25	99,13	1	0
46	3	3	49,73	75,95	91,41	14,22	85,14	102,26	1	0
46	3	3	50,35	80,78	64,10	12,42	88,70	73,66	1	0
46	3	3	53,90	89,87	39,20	15,03	98,72	51,34	1	0
46	3	3	53,80	85,86	41,52	14,76	94,57	53,43	1	0
46	3	3	53,07	91,80	56,10	13,32	99,80	66,75	1	0
46	3	4	112,62	94,57	53,43	24,89	85,00	76,41	1	0
46	3	4	111,31	85,86	41,52	28,08	75,66	67,68	1	0
52	3	1	346,29	34,27	67,03	15,95	49,76	63,25	1	0
52	3	1	340,53	33,00	60,10	20,25	52,10	53,35	1	0
52	3	1	337,24	43,40	40,51	19,70	61,56	32,89	1	0
52	3	1	340,35	62,79	54,46	29,38	90,45	44,58	1	0
52	3	1	345,29	51,11	75,22	23,75	74,08	69,19	1	0
52	3	1	338,75	43,51	48,04	20,11	62,26	40,75	1	0
52	3	2	85,74	73,45	60,73	8,48	74,08	69,19	1	0
52	3	2	83,56	49,76	63,25	12,05	51,11	75,22	1	0
52	3	2	87,78	62,26	40,75	13,72	62,79	54,46	1	0
52	3	2	79,69	33,00	60,10	7,04	34,27	67,03	1	0
52	3	2	89,12	43,40	40,51	7,53	43,51	48,04	1	0
52	3	2	87,51	90,07	35,67	8,92	90,45	44,58	1	0
52	3	3	303,55	73,45	60,73	30,07	90,07	35,67	1	0
52	3	3	303,64	74,08	69,19	29,56	90,45	44,58	1	0
52	3	3	299,36	51,11	75,22	23,88	62,79	54,46	1	0
52	3	3	294,81	52,10	53,35	22,54	61,56	32,89	1	0
52	3	3	297,95	33,00	60,10	22,18	43,40	40,51	1	0
52	3	3	295,97	34,27	67,03	21,12	43,51	48,04	1	0
52	3	3	297,44	49,76	63,25	24,71	61,15	41,32	1	0
52	3	4	5,56	61,56	32,89	28,64	90,07	35,67	1	0
52	3	4	19,07	52,10	53,35	22,59	73,45	60,73	1	0
53	3	1	24,54	85,25	72,20	10,49	94,79	76,55	1	0
53	3	1	22,63	64,61	83,04	12,39	76,04	87,81	1	0
53	3	1	35,52	71,68	54,96	11,42	80,98	61,60	1	0
53	3	1	29,27	50,98	69,22	10,63	60,25	74,41	1	0
53	3	1	32,29	48,08	61,35	11,38	57,70	67,43	1	0

53	3	1	25,26	69,22	47,54	9,82	78,10	51,73	1	0
53	3	2	68,03	80,98	61,60	11,43	85,25	72,20	1	0
53	3	2	75,64	92,08	65,95	10,94	94,79	76,55	1	0
53	3	2	82,34	74,56	76,80	11,11	76,04	87,81	1	0
53	3	2	71,62	69,22	47,54	7,81	71,68	54,96	1	0
53	3	2	69,76	48,08	61,35	8,39	50,98	69,22	1	0
53	3	2	63,20	60,25	74,41	9,67	64,61	83,04	1	0
53	3	3	332,28	64,61	83,04	23,32	85,25	72,20	1	0
53	3	3	329,02	76,04	87,81	21,87	94,79	76,55	1	0
53	3	3	328,23	74,56	76,80	20,60	92,08	65,95	1	0
53	3	3	328,26	60,25	74,41	24,37	80,98	61,60	1	0
53	3	3	326,85	48,08	61,35	25,24	69,22	47,54	1	0
53	3	3	322,42	57,70	67,43	25,74	78,10	51,73	1	0
53	3	3	325,43	50,98	69,22	25,13	71,68	54,96	1	0
53	3	4	45,48	78,10	51,73	19,94	92,08	65,95	1	0
53	3	4	29,06	57,70	67,43	19,29	74,56	76,80	1	0
56	3	1	325,84	101,93	53,89	14,23	113,71	45,90	1	0
56	3	1	321,64	71,14	62,01	40,29	102,73	37,01	1	0
56	3	1	322,60	84,89	39,70	13,71	95,78	31,38	1	0
56	3	1	318,70	50,05	45,02	42,86	82,25	16,73	1	0
56	3	1	326,23	82,29	33,70	15,96	95,56	24,83	1	0
56	3	2	88,06	95,56	24,83	6,55	95,78	31,38	1	0
56	3	2	82,73	102,74	36,79	17,12	101,93	53,89	1	0
56	3	2	90,97	50,05	45,02	6,54	49,94	51,56	1	0
56	3	2	89,53	71,14	62,01	6,76	71,20	68,77	1	0
56	3	2	89,85	82,25	16,73	16,97	82,29	33,70	1	0
56	3	3	39,02	95,78	31,38	23,07	113,71	45,90	1	0
56	3	3	38,18	95,56	24,83	22,87	113,54	38,97	1	0
56	3	3	40,55	82,25	16,73	27,95	103,49	34,90	1	0
56	3	3	39,80	84,89	39,70	22,17	101,93	53,89	1	0
56	3	3	38,98	49,94	51,56	27,35	71,20	68,77	1	0
56	3	3	38,84	50,05	45,02	27,08	71,14	62,01	1	0
56	3	3	40,90	82,56	41,09	22,61	99,65	55,89	1	0
56	3	4	335,65	71,20	68,77	31,24	99,65	55,89	1	0
56	3	4	342,20	49,94	51,56	34,27	82,56	41,09	1	0
58	3	1	2,68	82,02	79,53	19,61	101,61	80,45	1	1
58	3	1	2,62	82,03	69,87	19,60	101			

63	3	2	89,33	96,07	73,72	8,89	96,17	82,61	0	0
63	3	2	89,02	40,15	72,97	6,15	40,25	79,12	0	0
63	3	2	91,42	54,42	65,71	7,79	54,23	73,50	0	0
63	3	3	41,89	84,26	71,92	16,01	96,17	82,61	0	0
63	3	3	38,83	84,02	64,02	15,47	96,07	73,72	0	0
63	3	3	35,57	39,67	79,23	19,74	55,73	90,71	0	0
63	3	3	41,43	55,49	79,39	17,27	68,44	90,82	0	0
63	3	4	343,51	68,44	90,82	28,92	96,17	82,61	0	0
63	3	4	345,45	55,49	79,39	29,72	84,26	71,92	0	0
67	3	1	17,46	64,64	76,61	25,99	89,44	84,41	0	0
67	3	1	13,11	63,11	83,95	27,61	90,00	90,22	0	0
67	3	1	33,67	45,39	36,81	25,93	66,98	51,19	0	0
67	3	1	17,00	67,74	70,80	24,96	91,62	78,10	0	0
67	3	2	109,04	91,62	78,10	6,68	89,44	84,41	0	0
67	3	2	107,92	91,86	84,47	6,04	90,00	90,22	0	0
67	3	2	91,00	72,10	59,47	12,53	71,88	72,00	0	0
67	3	2	106,46	45,39	36,81	19,69	39,82	55,69	0	0
67	3	2	87,77	66,98	51,19	19,62	67,74	70,80	0	0
67	3	3	87,80	91,62	78,10	6,38	91,86	84,47	0	0
67	3	3	58,25	66,98	51,19	9,74	72,10	59,47	0	0
67	3	3	84,42	89,44	84,41	5,83	90,00	90,22	0	0
67	3	3	105,93	39,30	55,53	7,20	37,33	62,46	0	0
67	3	3	101,81	64,64	76,61	7,50	63,11	83,95	0	0
67	3	4	40,12	39,82	55,69	32,46	64,64	76,61	0	0
67	3	4	39,82	37,33	62,46	33,56	63,11	83,95	0	0
69	3	1	337,20	69,03	68,96	24,46	91,59	59,49	0	0
69	3	1	337,56	81,48	86,21	25,24	104,81	76,58	0	0
69	3	1	333,32	37,00	56,22	30,11	63,90	42,70	0	0
69	3	1	339,56	63,44	61,82	30,71	92,21	51,09	0	0
69	3	2	94,24	92,21	51,09	8,41	91,59	59,49	0	0
69	3	2	91,08	104,96	68,34	8,24	104,81	76,58	0	0
69	3	2	85,23	37,00	56,22	9,36	37,77	65,55	0	0
69	3	2	91,40	63,90	42,70	19,12	63,44	61,82	0	0
69	3	3	53,52	92,21	51,09	21,45	104,96	68,34	0	0
69	3	3	45,30	63,90	42,70	19,24	77,43	56,38	0	0
69	3	3	52,28	91,59	59,49	21,61	104,81	76,58	0	0
69	3	3	43,23	37,77	65,55	25,19	56,13	82,79	0	0
69	3	3	54,20	69,03	68,96	21,27	81,48	86,21	0	0
69	3	4	7,68	56,13	82,79	25,58	81,48	86,21	0	0
69	3	4	6,24	37,77	65,55	31,45	69,03	68,96	0	0
70	3	1	322,78	81,54	81,64	14,69	93,24	72,76	1	0
70	3	1	343,73	67,09	71,85	25,47	91,54	64,72	1	0
70	3	1	328,91	58,17	72,17	10,38	67,06	66,81	1	0
70	3	1	340,19	42,90	61,88	13,84	55,92	57,19	1	0
70	3	1	335,13	58,07	68,78	26,78	82,36	57,52	1	0
70	3	1	331,29	70,58	74,45	14,88	83,63	67,30	1	0
70	3	2	86,92	58,17	72,17	9,97	58,71	82,12	1	0
70	3	2	82,60	82,36	57,52	9,87	83,63	67,30	1	0
70	3	2	84,15	92,55	66,04	6,75	93,24	72,76	1	0
70	3	2	89,85	42,90	61,88	11,66	42,93	73,54	1	0
70	3	2	84,15	56,96	57,95	10,88	58,07	68,78	1	0
70	3	2	89,61	67,06	66,81	5,04	67,09	71,85	1	0
70	3	3	40,82	55,92	57,19	14,71	67,06	66,81	1	0
70	3	3	33,95	42,90	61,88	18,41	58,17	72,17	1	0
70	3	3	28,54	42,93	73,54	17,96	58,71	82,12	1	0
70	3	3	18,80	58,07	68,78	9,53	67,09	71,85	1	0
70	3	3	38,11	82,36	57,52	11,67	91,54	64,72	1	0
70	3	3	29,60	83,63	67,30	11,05	93,24	72,76	1	0
70	3	3	33,28	70,58	74,45	13,11	81,54	81,64	1	0
70	3	4	358,80	58,71	82,12	22,84	81,54	81,64	1	0
70	3	4	5,28	43,04	71,90	27,66	70,58	74,45	1	0
72	3	1	336,42	55,63	64,84	14,20	68,64	59,15	0	0
72	3	1	344,73	64,73	79,96	18,27	82,36	75,15	0	0
72	3	1	347,98	23,11	46,51	27,20	49,71	40,85	0	0
72	3	1	331,47	53,20	57,62	15,51	66,83	50,22	0	0
72	3	2	70,62	81,03	65,89	9,25	84,10	74,62	0	0
72	3	2	91,15	59,74	51,09	2,63	59,69	53,72	0	0
72	3	2	78,53	66,83	50,22	9,12	68,64	59,15	0	0
72	3	2	81,80	23,11	46,51	9,59	24,48	56,00	0	0
72	3	2	78,25	49,71	40,85	17,13	53,20	57,62	0	0
72	3	3	47,82	66,83	50,22	21,16	81,03	65,89	0	0
72	3	3	45,59	49,71	40,85	14,33	59,74	51,09	0	0
72	3	3	49,39	68,64	59,15	21,07	82,36	75,15	0	0

72	3	3	52,93	24,48	56,00	20,02	36,55	71,98	0	0
72	3	3	55,53	55,63	64,84	16,55	64,99	78,48	0	0
72	3	4	14,54	36,55	71,98	28,02	63,67	79,01	0	0
72	3	4	15,83	24,48	56,00	32,37	55,63	64,84	0	0
76	3	1	355,06	49,38	54,29	17,72	67,03	52,76	0	0
76	3	1	357,91	49,91	46,35	14,68	64,58	45,82	0	0
76	3	1	354,91	41,43	60,78	15,50	56,86	59,41	0	0
76	3	1	357,79	67,94	64,06	27,76	95,68	62,99	0	0
76	3	1	359,43	58,32	69,79	30,72	89,03	69,48	0	0
76	3	2	82,04	56,86	59,41	10,48	58,32	69,79	0	0
76	3	2	92,27	95,99	55,28	7,72	95,68	62,99	0	0
76	3	2	85,36	67,03	52,76	11,34	67,94	64,06	0	0
76	3	2	85,78	40,89	53,53	7,27	41,43	60,78	0	0
76	3	2	93,85	49,91	46,35	7,96	49,38	54,29	0	0
76	3	3	329,26	58,32	69,79	11,20	67,94	64,06	0	0
76	3	3	315,69	89,03	69,48	9,29	95,68	62,99	0	0
76	3	3	326,83	56,86	59,41	12,14	67,03	52,76	0	0
76	3	3	321,48	40,89	53,53	11,52	49,91	46,35	0	0
76	3	3	320,76	41,43	60,78	10,26	49,38	54,29	0	0
76	3	4	19,41	61,75	43,22	36,29	95,99	55,28	0	0
79	3	1	23,83	87,84	39,62	14,59	101,19	45,52	0	0
79	3	1	21,53	86,29	34,24	18,48	103,47	41,02	0	0
79	3	1	23,28	77,88	59,74	11,56	88,50	64,31	0	0
79	3	1	14,12	48,74	45,00	32,63	80,39	52,96	0	0
79	3	1	13,79	40,11	61,21	13,79	73,75	69,47	0	0
79	3	2	119,18	87,84	39,62	15,28	80,39	52,96	0	0
79	3	2	116,96	103,47	41,02	5,04	101,19	45,52	0	0
79	3	2	86,63	39,60	52,44	8,79	40,11	61,21	0	0
79	3	2	99,30	50,07	36,89	8,21	48,74	45,00	0	0
79	3	3	111,91	80,39	52,96	17,79	73,75	69,47	0	0
79	3	3	124,02	101,19	45,52	22,67	88,50	64,31	0	0
79	3	3	123,96	50,07	36,89	18,75	39,60	52,44	0	0
79	3	3	118,03	48,74	45,00	18,37	40,11	61,21	0	0
79	3	4	355,81	50,07	36,89	36,31	86,29	34,24	0	0
80	3	1	335,90	36,94	73,79	49,99	82,58	53,37	0	0
80	3	1	333,13	40,57	56,24	58,39	92,65	29,84	0	0
80	3	1	338,43	55,07	82,21	50,32	101,87	63,71		

88	3	3	91,12	93,81	19,13	23,73	93,34	42,85	0	0
88	3	3	90,00	99,07	23,15	22,33	99,07	45,49	0	0
88	3	3	88,97	79,39	33,77	20,91	79,77	54,67	0	0
88	3	3	90,87	48,35	48,94	25,63	47,96	74,56	0	0
88	3	3	91,75	67,00	27,83	20,91	66,36	48,73	0	0
88	3	4	331,66	51,51	77,41	38,45	85,35	59,16	0	0
89	3	1	335,38	72,61	60,66	20,49	91,24	52,13	0	0
89	3	1	338,93	96,02	75,26	22,55	117,06	67,15	0	0
89	3	1	333,28	34,51	52,04	36,63	67,23	35,57	0	0
89	3	1	332,95	69,54	51,87	21,77	88,93	41,97	0	0
89	3	2	77,21	88,93	41,97	10,42	91,24	52,13	0	0
89	3	2	81,77	115,95	59,47	7,76	117,06	67,15	0	0
89	3	2	79,55	34,51	52,04	6,60	35,71	58,53	0	0
89	3	2	81,95	67,23	35,57	16,46	69,54	51,87	0	0
89	3	3	31,95	72,61	60,66	27,58	96,02	75,26	0	0
89	3	3	30,97	35,71	58,53	26,70	58,60	72,27	0	0
89	3	3	30,19	91,24	52,13	29,87	117,06	67,15	0	0
89	3	3	32,93	88,93	41,97	32,19	115,95	59,47	0	0
89	3	3	34,02	67,23	35,57	17,55	81,78	45,39	0	0
89	3	4	3,31	35,71	58,53	36,96	72,61	60,66	0	0
89	3	4	4,57	58,60	72,27	37,53	96,02	75,26	0	0
91	3	1	1,27	82,51	69,89	16,31	98,82	70,25	0	0
91	3	1	5,58	79,74	77,33	15,83	95,50	78,87	0	0
91	3	1	358,13	43,91	49,36	35,52	79,41	48,20	0	0
91	3	1	4,80	81,40	61,63	17,81	99,15	63,12	0	0
91	3	2	81,57	79,41	48,20	13,57	81,40	61,63	0	0
91	3	2	92,67	99,15	63,12	7,14	98,82	70,25	0	0
91	3	2	84,92	43,91	49,36	7,49	44,57	56,82	0	0
91	3	2	75,95	39,26	54,50	7,52	41,09	61,79	0	0
91	3	3	112,71	81,43	70,29	7,68	78,46	77,37	0	0
91	3	3	111,05	98,82	70,25	9,24	95,50	78,87	0	0
91	3	3	110,37	82,51	69,89	7,94	79,74	77,33	0	0
91	3	3	132,11	43,91	49,36	6,93	39,26	54,50	0	0
91	3	3	125,02	44,57	56,82	6,07	41,09	61,79	0	0
91	3	4	20,07	44,57	56,82	39,24	81,43	70,29	0	0
91	3	4	22,62	41,09	61,79	40,49	78,46	77,37	0	0
96	3	1	81,21	69,09	82,55	17,23	71,73	99,57	0	0
96	3	1	70,49	45,82	71,37	19,70	52,40	89,94	0	0
96	3	1	83,14	55,85	70,63	17,21	57,91	87,72	0	0
96	3	1	88,07	66,63	34,02	31,62	67,69	65,62	0	0
96	3	1	90,91	79,94	45,20	31,11	79,45	76,30	0	0
96	3	2	158,07	57,91	87,72	5,94	52,40	89,94	0	0
96	3	2	150,48	71,73	99,57	5,67	66,79	102,37	0	0
96	3	2	156,74	66,63	34,02	8,48	58,84	37,37	0	0
96	3	2	157,06	67,69	65,62	12,86	55,85	70,63	0	0
96	3	2	148,92	79,45	76,30	12,10	69,09	82,55	0	0
96	3	3	42,25	67,69	65,62	15,88	79,45	76,30	0	0
96	3	3	40,01	66,63	34,02	17,39	79,94	45,20	0	0
96	3	3	41,98	55,85	70,63	17,81	69,09	82,55	0	0
96	3	3	40,81	52,40	89,94	19,01	66,79	102,37	0	0
96	3	3	40,63	57,91	87,72	18,20	71,73	99,57	0	0
96	3	4	110,94	58,84	37,37	36,41	45,82	71,37	0	0
97	3	1	4,14	90,98	76,25	25,58	116,49	78,09	0	0
97	3	1	1,49	88,83	83,83	25,83	114,65	84,50	0	0
97	3	1	12,70	68,79	58,48	19,04	87,36	62,67	0	0
97	3	1	5,75	88,49	67,99	27,09	115,44	70,70	0	0
97	3	2	81,91	115,44	70,70	7,47	116,49	78,09	0	0
97	3	2	77,98	87,36	62,67	5,44	88,49	67,99	0	0
97	3	2	92,91	68,79	58,48	6,68	68,45	65,16	0	0
97	3	3	106,01	116,49	78,09	6,66	114,65	84,50	0	0
97	3	3	105,85	90,98	76,25	7,88	88,83	83,83	0	0
97	3	3	90,68	68,45	65,16	9,50	68,33	74,66	0	0
97	3	4	26,20	68,45	65,16	25,11	90,98	76,25	0	0
97	3	4	24,09	68,33	74,66	22,45	88,83	83,83	0	0
100	3	1	103,16	76,00	70,28	22,21	70,95	91,91	0	0
100	3	1	91,64	59,41	75,98	13,60	59,02	89,58	0	0
100	3	1	78,10	63,82	55,78	20,12	67,97	75,46	0	0
100	3	2	11,06	59,02	89,58	12,15	70,95	91,91	0	0
100	3	2	2,60	63,82	55,78	8,56	72,37	56,17	0	0
100	3	2	356,54	59,41	75,98	8,57	67,97	75,46	0	0
100	3	4	75,58	72,37	56,17	14,57	76,00	70,28	0	0
106	3	1	350,10	92,92	78,76	24,63	117,18	74,52	0	0
106	3	1	350,62	78,67	69,52	18,79	97,20	66,46	0	0

106	3	1	348,79	43,08	58,22	32,49	74,95	51,91	0	0
106	3	2	353,24	78,80	63,16	16,32	95,01	61,24	0	0
106	3	2	67,15	95,01	61,24	5,66	97,20	66,46	0	0
106	3	2	90,00	117,18	71,44	3,08	117,18	74,52	0	0
106	3	2	87,40	43,08	58,22	6,05	43,35	64,26	0	0
106	3	2	71,13	74,95	51,91	11,89	78,80	63,16	0	0
106	3	3	24,71	95,01	61,24	24,41	117,18	71,44	0	0
106	3	3	28,73	74,95	51,91	19,83	92,34	61,44	0	0
106	3	3	21,99	97,20	66,46	21,54	117,18	74,52	0	0
106	3	3	30,14	43,35	64,26	22,35	62,68	75,48	0	0
106	3	3	32,95	78,67	69,52	16,98	92,92	78,76	0	0
106	3	4	8,47	43,35	64,26	35,70	78,67	69,52	0	0
106	3	4	6,18	62,68	75,48	30,41	92,92	78,76	0	0
107	3	1	0,54	85,98	72,79	20,61	106,59	72,98	0	0
107	3	1	0,00	93,11	78,95	18,68	111,79	78,95	0	0
107	3	1	359,65	48,05	50,28	31,20	79,24	50,09	0	0
107	3	1	0,41	79,82	64,90	27,16	106,98	65,09	0	0
107	3	2	92,80	106,98	65,09	7,22	117,18	74,52	0	0
107	3	2	91,27	111,98	70,29	8,66	111,79	78,95	0	0
107	3	2	87,84	48,05	50,28	10,21	48,43	60,48	0	0
107	3	2	87,77	79,24	50,09	14,83	79,82	64,90	0	0
107	3	3	48,92	106,59	65,09	7,22	111,79	78,95	0	0
107	3	3	46,06	106,98	65,09	7,22	111,79	78,95	0	0
107	3	3	82,64	48,43	60,48	6,01	49,20	66,44	0	0
107	3	3	40,83	85,98	72,79	9,42	93,11	78,95	0	0
107	3	4	18,16	48,43	60,48	39,52	85,98	72,79	0	0
107	3	4	15,90	49,20	66,44	45,66	93,11	78,95	0	0
112	3	1	350,68	69,04	52,20	13,08	81,94	50,09	0	0
112	3	1	352,21	75,58	68,94	14,19	89,64	67,02	0	0
112	3	1	355,43	42,85	39,69	24,15	66,92	37,77	0	0
112	3	1	358,41	66,92	43,93	13,87	80,78	43,54	0	0
112	3	2	86,18	89,26	61,25	5,79	89,64	67,02	0	0
112	3	2	85,10	42,85	39,69	6,76	43,42	46,43	0	0
112	3	2	90,00	66,92	37,77	6,16	66,92	43,93	0	0
112	3	2	79,98	80,78	43,54	6,64	81,94	50,09	0	0
112	3	3	68,64	69,04	52,20	17,98	75,58	68,94	0	0
112	3	3	59,89	43,42						

121	3	1	0,86	44,98	48,32	42,51	87,48	48,95	0	0
121	3	2	56,54	88,08	70,82	7,90	92,43	77,41	0	0
121	3	2	57,55	87,48	48,95	9,53	92,59	57,00	0	0
121	3	2	83,78	110,72	77,86	4,70	111,23	82,53	0	0
121	3	2	137,75	46,05	69,87	4,72	42,56	73,04	0	0
121	3	2	142,79	44,98	48,32	5,27	40,78	51,50	0	0
121	3	3	90,45	92,59	57,00	20,41	92,43	77,41	0	0
121	3	3	87,26	109,74	57,42	20,46	110,72	77,86	0	0
121	3	3	88,44	87,48	48,95	21,87	88,08	70,82	0	0
121	3	3	87,14	44,98	48,32	21,57	46,05	69,87	0	0
121	3	3	88,19	40,78	51,50	21,30	41,45	72,80	0	0
121	3	4	10,16	42,56	73,04	52,70	94,43	82,34	0	0
124	3	1	43,86	77,24	52,21	24,31	94,77	69,06	0	0
124	3	1	38,38	59,60	78,09	24,48	78,79	93,29	0	0
124	3	1	40,40	70,74	57,88	27,73	91,86	75,85	0	0
124	3	1	39,13	42,30	49,56	29,23	64,97	68,01	0	0
124	3	1	40,50	33,92	64,16	29,97	56,71	83,63	0	0
124	3	2	119,67	70,74	57,88	11,66	64,97	68,01	0	0
124	3	2	113,19	94,77	69,06	7,39	91,86	75,85	0	0
124	3	2	97,73	34,79	57,76	6,46	33,92	64,16	0	0
124	3	2	104,66	43,94	43,30	6,48	42,30	49,56	0	0
124	3	3	117,88	64,97	68,01	17,67	56,71	83,63	0	0
124	3	3	126,83	91,86	75,85	21,80	78,79	93,29	0	0
124	3	3	119,88	42,30	49,56	16,83	33,92	64,16	0	0
124	3	3	122,34	43,94	43,30	17,11	34,79	57,76	0	0
124	3	4	14,99	43,94	43,30	34,47	77,24	52,21	0	0
128	3	1	0,92	65,86	75,74	37,97	103,83	76,35	0	0
128	3	1	7,62	57,01	58,25	44,47	101,08	64,14	0	0
128	3	1	359,80	39,50	96,18	28,40	67,90	96,08	0	0
128	3	1	357,31	73,39	85,81	30,37	103,73	84,38	0	0
128	3	2	298,15	67,90	96,08	11,65	73,39	85,81	0	0
128	3	2	270,73	103,73	84,38	8,03	103,83	76,35	0	0
128	3	2	297,56	39,50	96,18	13,42	45,71	84,28	0	0
128	3	2	317,15	38,07	64,25	7,78	43,77	58,96	0	0
128	3	3	77,31	101,08	64,14	12,51	103,83	76,35	0	0
128	3	3	85,63	43,77	58,96	25,40	45,71	84,28	0	0
128	3	3	87,45	38,07	64,25	31,97	39,50	96,18	0	0
128	3	4	356,92	43,77	58,96	13,25	57,01	58,25	0	0
128	3	4	337,03	45,71	84,28	21,89	65,86	75,74	0	0
129	3	1	80,62	82,37	72,03	25,92	86,59	97,60	0	0
129	3	1	80,08	75,11	82,92	15,58	77,80	98,27	0	0
129	3	1	72,85	86,47	71,89	14,82	90,84	86,05	0	0
129	3	1	71,03	91,96	46,22	26,91	100,71	71,67	0	0
129	3	1	67,55	99,01	40,02	23,44	107,96	61,68	0	0
129	3	2	178,88	100,71	71,67	18,34	82,37	72,03	0	0
129	3	2	175,64	86,59	97,60	8,82	77,80	98,27	0	0
129	3	2	174,81	91,96	46,22	10,90	81,10	47,21	0	0
129	3	2	198,13	99,03	38,06	17,67	82,25	32,57	0	0
129	3	3	110,21	90,84	86,05	12,30	86,59	97,60	0	0
129	3	3	87,82	74,70	72,01	10,92	75,11	82,92	0	0
129	3	3	125,97	107,96	61,68	12,34	100,71	71,67	0	0
129	3	3	102,38	81,04	33,82	12,84	78,29	46,36	0	0
129	3	3	138,68	99,01	40,02	9,39	91,96	46,22	0	0
129	3	4	97,97	78,29	46,36	25,90	74,70	72,01	0	0
129	3	4	99,52	81,10	47,21	36,22	75,11	82,92	0	0
131	3	1	358,96	49,54	41,41	28,97	78,50	40,89	0	0
131	3	1	358,55	15,96	51,11	32,08	48,03	50,30	0	0
131	3	1	357,18	16,23	76,25	28,83	45,03	74,83	0	0
131	3	1	356,94	24,71	68,89	15,65	40,33	68,05	0	0
131	3	1	354,34	24,00	57,52	28,80	52,66	54,68	0	0
131	3	1	0,85	55,26	45,73	17,56	72,82	45,99	0	0
131	3	2	99,61	49,54	41,41	9,01	48,03	50,30	0	0
131	3	2	87,42	72,82	45,99	8,28	73,19	54,26	0	0
131	3	2	90,96	78,50	40,89	17,05	78,21	57,94	0	0
131	3	2	86,45	24,00	57,52	11,39	24,71	68,89	0	0
131	3	2	89,38	15,96	51,11	25,14	16,23	76,25	0	0
131	3	2	106,21	55,26	45,73	9,32	52,66	54,68	0	0
131	3	3	36,20	73,19	54,26	6,22	78,21	57,94	0	0
131	3	3	43,05	40,33	68,05	7,38	45,72	73,09	0	0
131	3	3	138,99	24,71	68,89	11,23	16,23	76,25	0	0
131	3	3	138,04	78,50	40,89	7,64	72,82	45,99	0	0
131	3	3	38,57	15,96	51,11	10,28	24,00	57,52	0	0
131	3	3	43,43	48,03	50,30	6,37	52,66	54,68	0	0

131	3	3	37,06	49,54	41,41	7,17	55,26	45,73	0	0
131	3	4	155,01	78,21	57,94	35,85	45,72	73,09	0	0
131	3	4	157,24	73,19	54,26	35,64	40,33	68,05	0	0
133	3	1	309,35	73,46	76,72	13,05	81,74	66,63	1	0
133	3	1	316,96	93,70	84,60	9,16	100,39	78,35	1	0
133	3	1	316,18	99,97	63,96	8,27	105,94	58,23	1	0
133	3	1	329,86	46,80	73,22	9,48	55,00	68,46	1	0
133	3	1	308,38	58,58	55,37	12,45	66,31	45,62	1	0
133	3	1	308,99	83,37	57,75	15,45	93,09	45,74	1	0
133	3	2	32,15	81,74	66,63	22,03	100,39	78,35	1	0
133	3	2	31,01	46,80	73,22	14,22	58,99	80,55	1	0
133	3	2	28,77	58,58	55,37	13,37	70,30	61,81	1	0
133	3	2	24,09	55,00	68,46	20,23	73,46	76,72	1	0
133	3	2	35,42	66,31	45,62	20,94	83,37	57,75	1	0
133	3	2	44,20	93,09	45,74	17,92	105,94	58,23	1	0
133	3	3	118,52	93,09	45,74	23,77	81,74	66,63	1	0
133	3	3	104,50	105,46	58,75	20,25	100,39	78,35	1	0
133	3	3	106,90	99,97	63,96	21,57	93,70	84,60	1	0
133	3	3	124,77	58,58	55,37	21,85	46,12	73,32	1	0
133	3	3	121,11	70,30	61,81	21,89	58,99	80,55	1	0
133	3	3	116,33	66,31	45,62	25,49	55,00	68,46	1	0
133	3	4	4,14	70,30	61,81	29,74	99,97	63,96	1	0
133	3	4	6,65	58,99	80,55	34,94	93,70	84,60	1	0
134	3	1	86,86	63,89	84,86	15,98	64,77	100,81	0	0
134	3	1	75,21	96,22	86,61	16,40	100,41	102,47	0	0
134	3	1	98,71	69,68	52,71	27,20	65,56	79,60	0	0
134	3	1	89,02	99,01	51,73	28,74	99,50	80,47	0	0
134	3	2	165,31	69,68	52,71	4,25	65,57	53,79	0	0
134	3	2	32,35	100,41	102,47	4,70	104,38	104,98	0	0
134	3	2	156,08	64,77	100,81	6,04	59,25	103,26	0	0
134	3	2	64,10	99,01	51,73	4,57	101,00	55,84	0	0
134	3	2	118,09	99,50	80,47	6,96	96,22	86,61	0	0
134	3	2	107,52	65,56	79,60	5,52	63,89	84,86	0	0
134	3	3	181,47	99,50	80,47	33,95	65,56	79,60	0	0
134	3	3	178,08	99,01	51,73	29,35	69,68	52,71	0	0
134	3	3	183,10	96,22						

7.3. Additional information

Tables 5, 6 and 7, show additional information from questionnaires:

- “F” includes the labels that identify every file that contains a sketch.
- “M” identifies the model.
- “Level” refers to the educational level of the participants:
 1. Participants with one or more university degree.
 2. University students.
 3. Secondary education between 16 and 18 years old.
 4. Secondary education with professional orientation.
 5. Secondary education until 16 years old.
- “Ambit” designates the study ambits of participants:
 1. Engineering
 2. Architecture
 3. BBAA (Artistics studies)
 4. Design
 5. Others...
- Age of the subject.
- Sex of the subject.

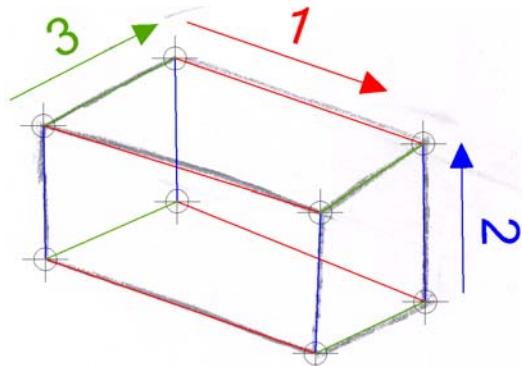


Table 5: Additional information from questionnaire
(model 1)

F	M	Level	Ambit	Age	Sex
7	1	1	4	35	M
8	1	1	4	34	F
13	1	1	2	35	F
18	1	1	4	31	M
25	1	2	1	20	M
30	1	2	1	24	M
33	1	2	1	22	M
36	1	2	1	21	M
37	1	2	1	28	M
47	1	2	1	24	M
48	1	2	1	27	M
50	1	2	1	43	M
51	1	2	1	29	M
54	1	2	1	19	M
57	1	2	1	26	M
59	1	2	1	22	M
64	1	2	1	18	F
66	1	2	1	18	F
68	1	2	1	18	F
71	1	2	1	18	F
73	1	2	1	19	M
74	1	2	1	18	M
75	1	2	1	19	M
84	1	1	1	36	F
86	1	1	1	34	F
90	1	1	1	38	M
92	1	1	1	34	F
93	1	1	1	56	M
94	1	1	1	35	F
98	1	2	5	20	M
99	1	1	5	42	M
101	1	4	5	55	M
102	1	1	5	26	M
104	1	2	2	20	M
108	1	2	2	20	M
111	1	2	5	23	F
113	1	4	5	28	F
114	1	2	2	24	M
117	1	2	5	23	F
122	1	3	5	43	M
125	1	1	2	27	M
126	1	4	5	40	M
127	1	1	5	44	F
130	1	4	5	27	M
135	1	5	5	66	F
136	1	1	1	30	M
141	1	1	2	36	M
143	1	1	1	47	M
145	1	4	5	40	M
147	1	1	1	37	F

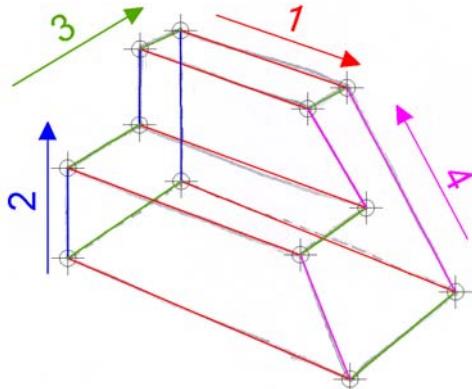


Table 6: Additional information from questionnaire
(model 2)

F	M	Level	Ambit	Age	Sex
1	2	1	1	55	M
2	2	1	3	47	F
3	2	1	2	41	F
5	2	1	2	40	M
10	2	1	5	35	M
12	2	1	2	37	M
15	2	1	4	37	M
17	2	1	4	35	M
19	2	1	1	35	F
21	2	1	1	56	F
24	2	1	1	37	F
26	2	2	1	24	M
27	2	2	1	24	M
34	2	2	1	23	M
40	2	2	1	20	F
41	2	2	1	21	F
42	2	2	1	20	M
49	2	2	1	23	M
55	2	2	1	20	M
61	2	2	1	25	M
62	2	2	1	23	F
65	2	2	1	18	F
77	2	2	1	19	F
78	2	2	1	18	F
81	2	2	1	18	M
82	2	2	1	19	M
83	2	1	1	36	F
85	2	1	1	34	F
95	2	1	1	35	F
103	2	4	5	27	M
105	2	2	2	20	M
109	2	2	5	23	F
110	2	4	5	28	F
115	2	2	5	23	F
118	2	2	2	24	M
120	2	3	5	43	M
123	2	1	5	26	M
132	2	1	2	27	M
137	2	1	1	30	M
140	2	1	2	36	M
142	2	1	1	47	M
144	2	1	1	47	M
146	2	1	1	55	M

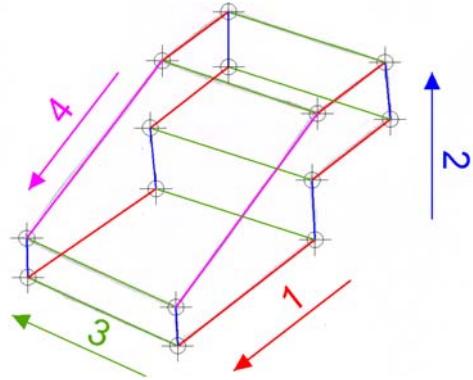


Table 7: Additional information from questionnaire
(model 3)

F	M	Level	Ambit	Age	Sex
4	3	1	2	41	F
6	3	1	4	31	M
9	3	1	3	35	M
11	3	1	2	37	M
14	3	1	2	37	M
16	3	1	2	40	M
20	3	1	1	35	F
22	3	1	1	56	M
23	3	1	1	37	F
28	3	2	1	24	M
29	3	2	1	20	M
31	3	2	1	23	M
32	3	2	1	24	M
35	3	2	1	23	M
38	3	2	1	20	M
39	3	2	1	20	M
43	3	2	1	18	M
44	3	2	1	18	M
45	3	2	1	18	F
46	3	2	1	28	F
52	3	2	1	29	M
53	3	2	1	29	F
56	3	2	1	28	M
58	3	2	1	22	M
60	3	2	1	23	M
63	3	2	1	23	M
67	3	2	1	18	F
69	3	2	1	18	M
70	3	2	1	18	M
72	3	2	1	18	M
76	3	2	1	19	M
79	3	2	1	19	M
80	3	2	1	19	M
87	3	1	1	34	F
88	3	1	1	37	F
89	3	1	1	38	M
91	3	1	1	34	F
96	3	1	1	35	F
97	3	2	5	20	M
100	3	4	5	55	M
106	3	2	2	20	M
107	3	2	5	23	F
112	3	2	5	23	F
116	3	2	2	24	M
119	3	4	5	28	F
121	3	3	5	43	M
124	3	1	2	27	M
128	3	1	5	44	F
129	3	1	5	42	M
131	3	4	5	40	M
133	3	4	5	27	M
134	3	5	5	66	F
138	3	1	1	30	M
139	3	1	2	36	M

7.4. Angular dispersion

Tables 8, 9 and 10, show calculated data (Angular dispersion) from exported information, that means the maximum angle value among the slope differences between each pair of lines representing parallel edges parallel of the original 3D model:

$$AD = \max |\alpha_i - \alpha_j| / i=1,2,\dots,n; j=1,2,\dots,n; i \neq j,$$

where n defines each of the set of lines belonging to a specific direction. It is intended to measure the maximum freehand sketching error which occurs when designers draw parallel lines

- “F” includes the labels that identify every file that contains a sketch.
- “M” identifies the model.
- The following columns present the calculated parameter of Angular Dispersion (AD). First it is shown by each direction, and later the maximum AD value in the file is remarked.

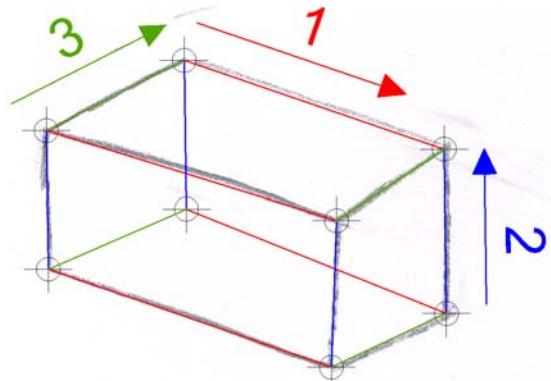


Table 8: Calculated AD in each direction and max AD for each file (model 1)

F	M	AD dir 1	AD dir 2	AD dir 3	max AD
7	1	8,59	5,20	5,73	8,59
8	1	1,54	0,42	2,74	2,74
13	1	3,73	1,08	18,04	18,04
18	1	14,16	18,84	3,59	18,84
25	1	1,93	8,46	2,87	8,46
30	1	0,95	1,76	11,57	11,57
33	1	3,86	4,38	6,19	6,19
36	1	0,91	6,08	6,22	6,22
37	1	8,04	6,27	9,89	9,89
47	1	2,33	4,73	1,93	4,73
48	1	3,57	5,45	9,95	9,95
50	1	1,31	2,78	4,23	4,23
51	1	1,18	2,74	6,55	6,55
54	1	4,21	1,75	2,98	4,21
57	1	2,14	4,30	13,11	13,11
59	1	2,09	3,49	4,55	4,55
64	1	2,04	3,23	3,47	3,47
66	1	2,08	2,06	3,51	3,51
68	1	8,21	12,37	2,79	12,37
71	1	2,96	2,57	4,25	4,25
73	1	3,65	2,34	2,83	3,65
74	1	2,13	2,00	0,71	2,13
75	1	7,26	8,75	10,53	10,53
84	1	6,84	1,26	11,19	11,19
86	1	5,16	5,26	0,95	5,26
90	1	2,35	0,89	1,18	2,35
92	1	2,64	2,65	12,14	12,14
93	1	0,69	1,11	8,38	8,38
94	1	1,46	3,16	8,18	8,18
98	1	4,10	1,83	25,09	25,09
99	1	4,79	10,29	47,24	47,24
101	1	4,85	14,23	48,87	48,87
102	1	5,52	1,25	2,63	5,52
104	1	0,27	2,06	38,11	38,11
108	1	4,49	1,02	0,87	4,49
111	1	3,00	3,47	5,69	5,69
113	1	4,92	1,29	4,62	4,92
114	1	2,43	1,06	4,51	4,51
117	1	2,82	5,70	13,94	13,94
122	1	2,26	9,46	11,20	11,20
125	1	2,12	0,25	4,86	4,86
126	1	1,91	89,83	6,94	89,83
127	1	3,99	3,50	7,38	7,38
130	1	3,33	23,75	19,49	23,75
135	1	3,47	87,71	2,41	87,71
136	1	2,54	5,34	0,56	5,34
141	1	1,24	3,33	7,42	7,42
143	1	1,66	3,19	3,55	3,55
145	1	18,13	2,83	77,08	77,08
147	1	3,04	1,94	1,39	3,04

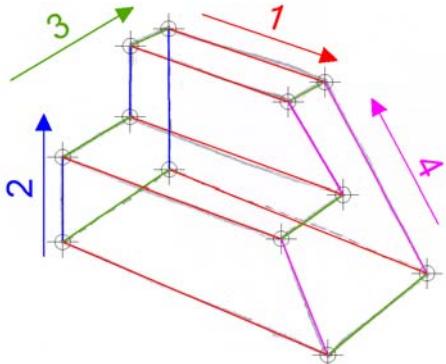


Table 9: Calculated AD in each direction and max AD for each file (model 2)

F	M	AD dir 1	AD dir 2	AD dir 3	AD dir 4	max AD
1	2	0,77	2,98	6,57	5,44	6,57
2	2	4,06	2,94	4,47	1,29	4,47
3	2	1,49	3,99	6,55	5,95	6,55
5	2	6,13	0,51	7,92	4,48	7,92
10	2	3,99	0,26	15,02	4,29	15,02
12	2	0,73	5,77	13,17	5,26	13,17
15	2	3,36	1,11	5,73	6,84	6,84
17	2	10,15	3,37	10,09	7,77	10,15
19	2	2,70	0,01	7,64	6,75	7,64
21	2	2,04	2,17	9,20	8,39	9,20
24	2	4,13	2,04	21,66	4,77	21,66
26	2	9,34	3,27	19,57	12,02	19,57
27	2	3,44	2,05	9,24	7,34	9,24
34	2	6,41	6,86	17,26	1,20	17,26
40	2	9,98	3,54	13,17	4,96	13,17
41	2	6,01	1,12	14,38	9,53	14,38
42	2	2,37	3,78	11,35	3,12	11,35
49	2	7,16	1,18	17,72	20,03	20,03
55	2	1,32	1,02	0,74	0,00	1,32
61	2	3,22	2,87	0,00	7,43	7,43
62	2	0,45	2,80	0,00	4,67	4,67
65	2	6,84	9,88	9,08	3,52	9,88
77	2	4,20	0,68	15,01	8,79	15,01
78	2	4,67	6,21	15,03	1,90	15,03
81	2	1,71	6,30	17,12	7,00	17,12
82	2	1,14	1,41	7,90	4,61	7,90
83	2	5,04	2,65	17,74	18,21	18,21
85	2	4,75	2,69	6,53	4,84	6,53
95	2	5,28	22,06	6,37	8,10	22,06
103	2	6,80	1,09	36,00	11,74	36,00
105	2	2,04	2,05	10,87	12,06	12,06
109	2	0,97	1,26	43,86	5,69	43,86
110	2	6,51	1,11	31,38	1,69	31,38
115	2	3,18	3,74	27,65	3,37	27,65
118	2	2,51	2,65	3,53	5,45	5,45
120	2	1,33	0,00	18,70	5,24	18,70
123	2	2,33	0,19	2,43	3,00	3,00
132	2	3,92	2,99	7,24	44,87	44,87
137	2	1,03	0,44	17,42	12,45	17,42
140	2	2,97	6,66	9,38	1,07	9,38
142	2	19,85	17,31	6,27	0,00	19,85
144	2	3,38	29,16	5,64	3,95	29,16
146	2	3,72	0,00	3,69	0,56	3,72

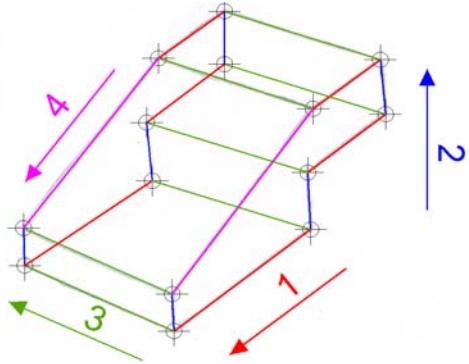


Table 10: Calculated AD in each direction and max AD for each file (model 3)

F	M	AD dir 1	AD dir 2	AD dir 3	AD dir 4	max AD
4	3	3,63	9,22	5,82	2,88	9,22
6	3	7,04	9,53	9,53	8,04	9,53
9	3	16,84	14,76	10,77	0,00	16,84
11	3	3,54	13,23	7,16	1,54	13,23
14	3	4,67	5,36	7,80	2,71	7,80
16	3	9,90	39,39	13,99	0,00	39,39
20	3	2,29	6,15	6,13	2,68	6,15
22	3	4,43	6,72	5,59	0,14	6,72
23	3	4,24	4,60	13,27	0,15	13,27
28	3	2,74	7,64	6,05	0,00	7,64
29	3	8,54	10,94	34,50	2,09	34,50
31	3	6,94	29,07	47,21	1,60	47,21
32	3	1,37	3,69	6,95	1,19	6,95
35	3	4,04	4,40	7,27	0,13	7,27
38	3	7,65	20,78	6,35	0,63	20,78
39	3	3,56	2,41	0,00	0,00	3,56
43	3	2,90	2,01	7,86	0,00	7,86
44	3	7,03	4,34	6,95	0,00	7,03
45	3	34,34	10,38	9,95	6,47	34,34
46	3	8,47	10,54	10,86	1,32	10,86
52	3	9,05	9,43	8,82	13,51	13,51
53	3	12,89	19,15	9,86	16,42	19,15
56	3	7,53	4,67	2,72	6,55	7,53
58	3	7,71	5,95	4,54	2,05	7,71
60	3	2,85	2,06	2,37	0,00	2,85
63	3	5,41	3,13	6,31	1,94	6,31
67	3	20,56	21,27	47,68	0,30	47,68
69	3	6,24	9,01	10,97	1,44	10,97
70	3	20,95	7,25	22,02	6,49	22,02
72	3	16,51	20,53	9,93	1,29	20,53
76	3	4,52	11,81	13,57	0,00	13,57
79	3	10,04	32,55	12,12	0,00	32,55
80	3	5,30	4,45	5,62	4,94	5,62
87	3	1,72	3,47	3,39	1,43	3,47
88	3	13,51	14,88	2,78	0,00	14,88
89	3	5,98	4,74	3,83	1,26	5,98
91	3	7,45	16,71	21,74	2,55	21,74
96	3	20,41	9,14	2,24	0,00	20,41
97	3	11,22	14,93	15,33	2,11	15,33
100	3	25,05	14,53	0,00	0,00	25,05
106	3	4,45	22,85	10,96	2,30	22,85
107	3	0,89	5,03	41,81	2,26	41,81
112	3	7,73	10,02	8,75	1,32	10,02
116	3	5,50	11,45	4,67	1,61	11,45
119	3	3,06	10,57	3,99	0,41	10,57
121	3	0,76	86,25	3,31	0,00	86,25
124	3	5,48	21,93	8,95	0,00	21,93
128	3	10,31	46,42	10,14	19,89	46,42
129	3	13,07	23,32	50,86	1,55	50,86
131	3	6,51	19,76	85,39	2,24	85,39
133	3	21,48	20,11	20,28	2,51	21,48
134	3	23,50	88,02	5,02	11,21	88,02
138	3	2,25	4,86	5,45	0,75	5,45
139	3	2,85	3,00	11,43	1,15	11,43