State University of New York at Buffalo
Department of Mechanical and Aerospace Engineering.

MAE 415: ANALYSIS OF STRUCTURE

Fall Semester-2001

PROJECT REPORT

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TABLE OF CONTENT:

Question:

For the frame of the monoplane shown, compute (1) The forces exerted on the wheels by the frame and (2) maximum stresses in each member, when a 300 lb of load is applied on the seat.

Requirement:

1. Need to use an energy method to account for bending effects.
2. Isolate and analyze only the frame structure. Model the wings with plate elements or replace them by appropriate loads on the frame structure.
3. Assume realistic dimensions for the frame (tube diameters, material properties, angles between joints etc.)
4. Use the Virtual Analysis package for this project.

Analysis:

We decided to use the Virtual Analysis software to complete this project. This will greatly simplified our analysis process. However, before we can use the software to solve this problem, some basic assumptions and simplifications of the problem was done. This was done in the following section.

Assumptions:

1. We assume all the material use is homogeneous, and isotropic materials. This means that the materials have the same mechanical and thermal properties in all direction (Bruce 162). All axes within the material are axes of material symmetry just as any diameter is an axis of symmetric for a circle (Bruce 163).

2. The beams that we are going to analyze are base on the approximation to the actual beam deflection, which is so called "*The engineering theory of beam bending*, or *Bernouli-Euler beam theory*"(Bruce 236). This required the deformation of the long beam to be:
    i. The planar cross-section of the undeformed beam remains plane after deformation.
    ii. The planar cross-section remains perpendicular to any axis along the length of the beam.
    iii. The planar cross-section retains their original size and shape after deformation.

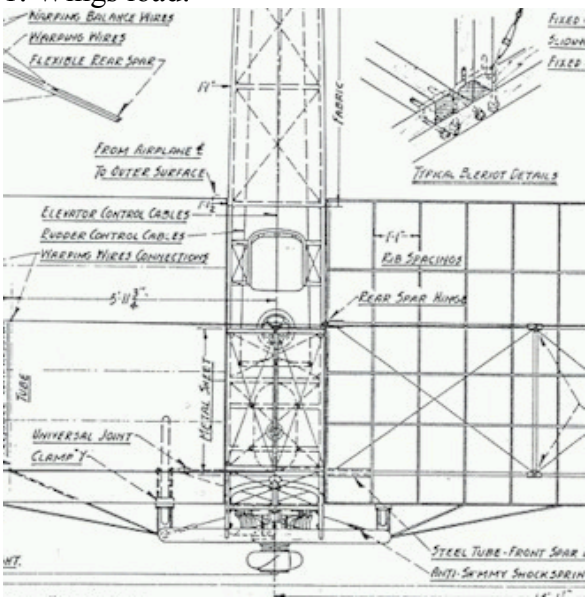
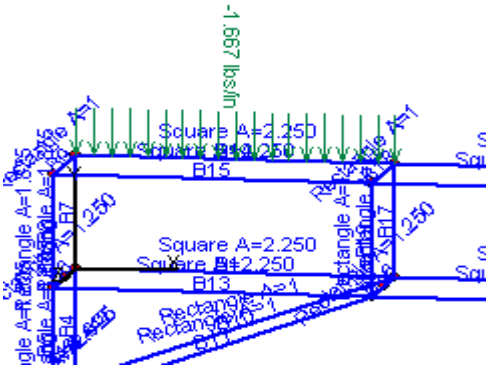
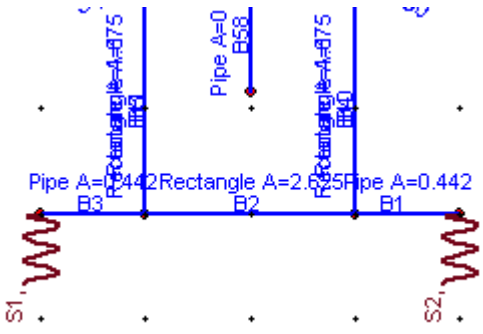
3. According to Professor Patra, this required that the beam must have a length of 5 to 6 times larger than the cross-section of the beam. In our model, we tried not to use beam that are too short (at least 5 to 6 times larger than the cross-section) such that the beam theory will still valid for our model.

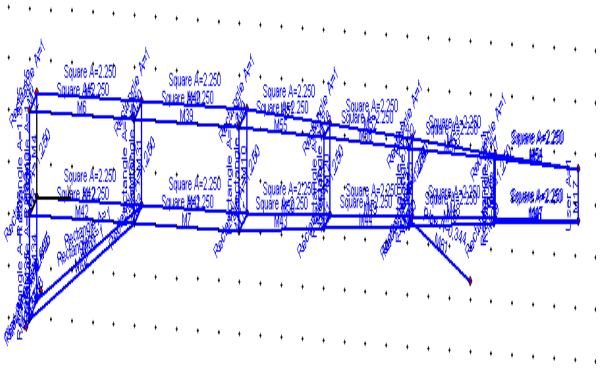
4. For short beam, Bernouli-Euler beam theory will not valid and instead, we should use Timoshenko beam theory for short beam.

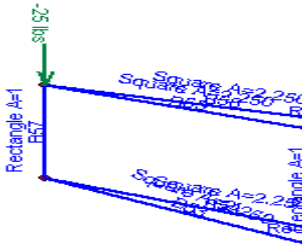
5. The Virtual analysis software is base on small displacement theory. Furthermore, this software cannot model two continuous members with a pin connection in between them (Reference 2). We can only model a long continuous beam that is connected with beams if we need to connect other beams on that beams.

6. The analysis that we made here is in static condition. That is the plane is statically staying on the ground. In this case, we do not need to consider the force cause by air drag, lift force, and thrust cause by the engine. Only the gravitational force is acting on the plane.

Simplification process for the model:

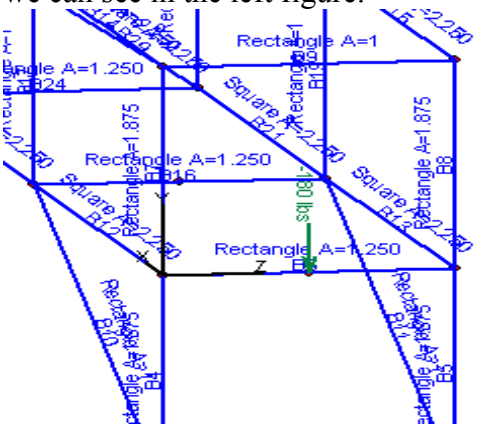
1. Wings load: 	The wings to frame ratio was estimated to be 2:3. So, the total weight of the wings was estimated to be 100 lb for each side of the wing. (See Appendix 1). The wings load was assume to be uniformly distributed in the front square structure of the main frame. 
2. Wheels: 	The tires that use in this plane were simple. Since we are going to compute the force exert on the wheels in the static condition, the wheels was replace by a spring with a stiffness of 800lb/inch. As shown below: 

3. Frame structure: 	From this graph we can see that the main structure was made by wood, the main structure was a square beams we estimate the beam to be a 1.5 inch x 1.5 inch, as shown below: 

4. Elevators and rudder: 	The elevator and the rudder was replace by a point load on the frame, this is because the weight of the elevators and the rudder was small if compare to the weight of the wings. Thus, load exert by these two structure can be appropriate assumed to be a point load. The weight was assumed to be 25lb total, which will exert on the tip of the structure. As shown bellow: 

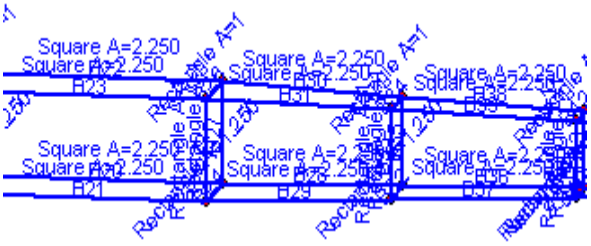
Engine load:

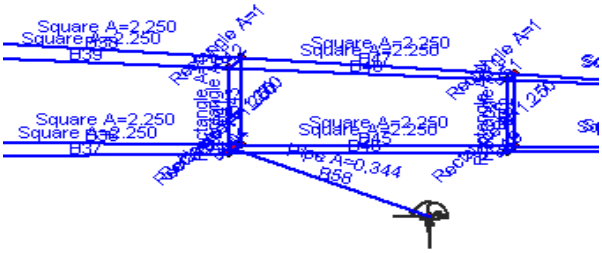
The Engine used for this monoplane is Anzani 3-cylinder air-cooled radial, 22-25 hp. The weight of the motor was found to be 180lb. (See Appendix 2). The engine was assumed to be point load on the main frame structure as we can see in the left figure.



Cross beams:

The cross beams within the frame structure was assume to be negligible. As we can see in the left figure, the cross beam was made to hold the structure. It was made from steel. In our analysis, we neglect the effect of these cross beams. However, these steels actually contribute a lot on holding the structure rigid. As shown below, the cross beam was neglected:



Support: 	The support at the back of the monoplane was made a fixed joint. This is because when we try to use a free support for this joint, the software does not allowed the use of a free joint on the ground because it does not recognized a free joint on the ground. So, we have to use a fixed joint to joint the structure with the ground. By doing this, we lost some of the accuracy for our result due to this modification. This was shown below. 

After these simplifications, we were able to do the analysis by using Virtual Analysis software. The main structure of the frame was shown below:

The isolated frame structure was shown in the Graph below:

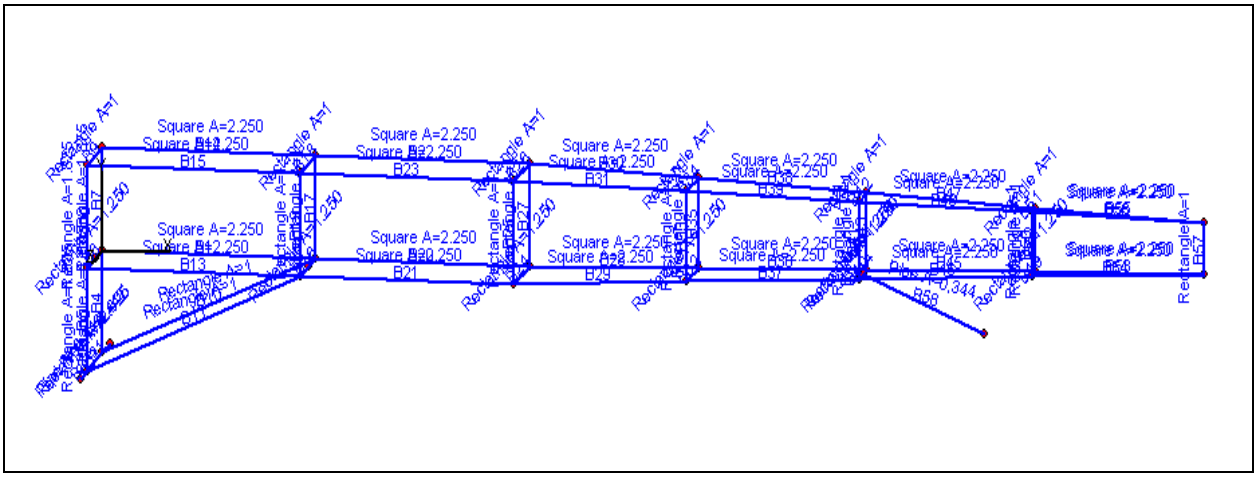


Figure 4. Graph shows the isolated frame structure after our simplification. This graph shows the front view of the frame.

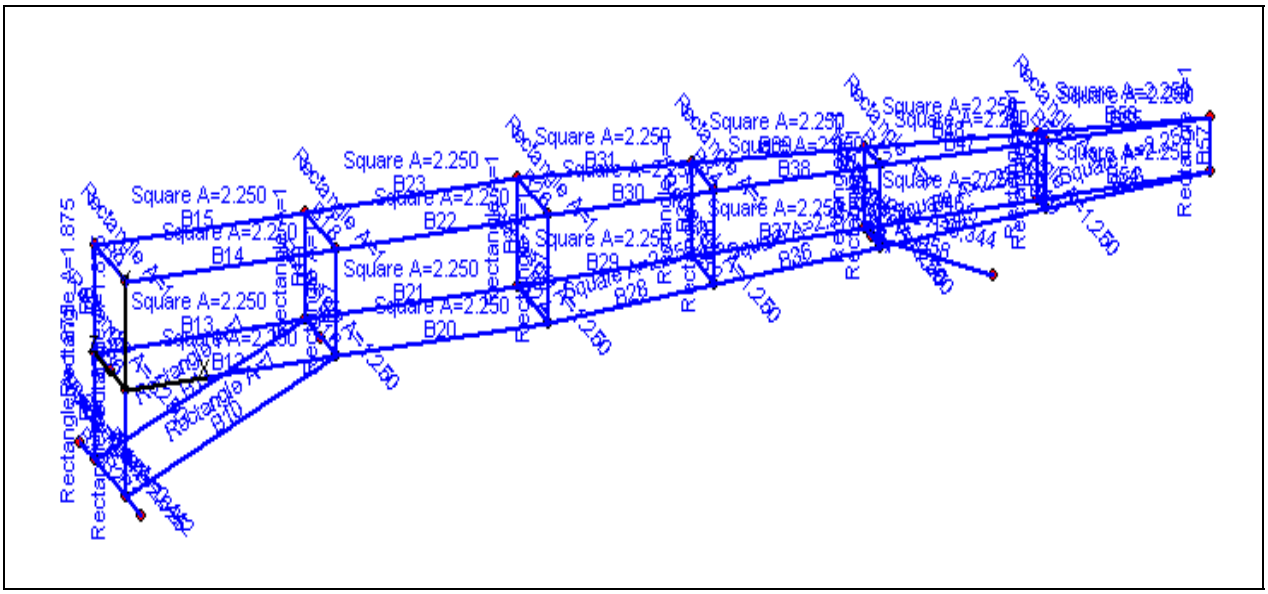


Figure 5. Graph shows the iso view of the frame structure after our simplification.

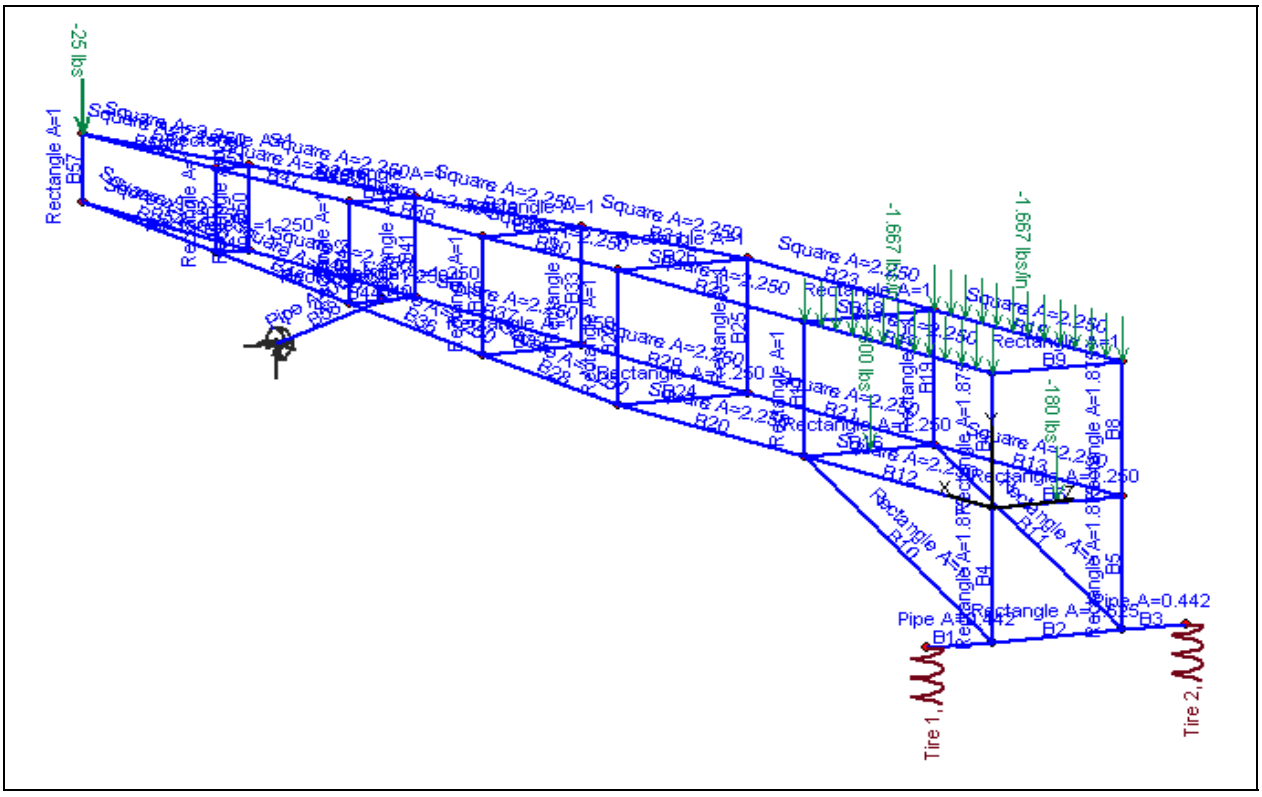


Figure 6. Graph shows all the loading acting on the frame structure.

Table 1.Summary of beams dimension used in Virtual Analysis.

Beam number	Material used	Shape	Length (inch)	Width/inner dia (inch)	Depth/outer dia (inch)
B1	Steel	Pipe	12	1	1.25
B2	Wood	Rectangular	24	3.5	0.75
B3	Steel	Pipe	12	1	1.25
B4	Wood	Rectangular	24	2.5	0.75
B5	Wood	Rectangular	24	2.5	0.75
B6	Wood	Rectangular	24	0.5	2.5
B7	Wood	Rectangular	24	2.5	0.75
B8	Wood	Rectangular	24	2.5	0.75
B9	Wood	Rectangular	24	2	0.5
B10	Wood	Rectangular	64.622	0.5	2
B11	Wood	Rectangular	64.622	0.5	2
B12	Wood	Square	60	1.5	1.5
B13	Wood	Square	60	1.5	1.5
B14	Wood	Square	60	1.5	1.5
B15	Wood	Square	60	1.5	1.5
B16	Wood	Rectangular	24	2.5	0.5
B17	Wood	Rectangular	24	0.5	2
B18	Wood	Rectangular	24	2	0.5
B19	Wood	Rectangular	24	0.5	2
B20	Wood	Square	60	1.5	1.5
B21	Wood	Square	60	1.5	1.5
B22	Wood	Square	60	1.5	1.5
B23	Wood	Square	60	1.5	1.5
B24	Wood	Rectangular	24	2.5	0.5
B25	Wood	Rectangular	24	0.5	2
B26	Wood	Rectangular	24	2	0.5
B27	Wood	Rectangular	24	0.5	2
B28	Wood	Square	48.117	1.5	1.5
B29	Wood	Square	48.117	1.5	1.5
B30	Wood	Square	48.117	1.5	1.5
B31	Wood	Square	48.117	1.5	1.5
B32	Wood	Rectangular	18	2.5	0.5
B33	Wood	Rectangular	21	0.5	2
B34	Wood	Rectangular	18	2	0.5
B35	Wood	Rectangular	21	0.5	2
B36	Wood	Square	48.117	1.5	1.5
B37	Wood	Square	48.117	1.5	1.5
B38	Wood	Square	48.117	1.5	1.5
B39	Wood	Square	48.117	1.5	1.5
B40	Wood	Rectangular	6	2.5	0.5
B41	Wood	Rectangular	18	0.5	2
B42	Wood	Rectangular	12	2	0.5

B43	Wood	Rectangular	18	0.5	2
B44	Wood	Rectangular	6	2.5	0.5
B45	Wood	Square	48.117	1.5	1.5
B46	Wood	Square	48.117	1.5	1.5
B47	Wood	Square	48.117	1.5	1.5
B48	Wood	Square	48.117	1.5	1.5
B49	Wood	Rectangular	6	2.5	0.5
B50	Wood	Rectangular	15	0.5	2
B51	Wood	Rectangular	6	2	0.5
B52	Wood	Rectangular	15	0.5	2
B53	Wood	Square	48.117	1.5	1.5
B54	Wood	Square	48.117	1.5	1.5
B55	Wood	Square	48.117	1.5	1.5
B56	Wood	Square	48.117	1.5	1.5
B57	Wood	Rectangular	12	0.5	2
B58	Steel	Pipe	36.4005	0.75	1

Note: In this table, the column for the width and depth was for the rectangular and square cross-section, the inner diameter and outer diameter was used for the pipe.

RESULTS:

After generated the frame structure in Virtual Analysis. We are able to use the software to calculate the maximum stresses in each beams and the force exerted on the wheels. The following graph shows the bending effect of the frame structure due to the given loading.

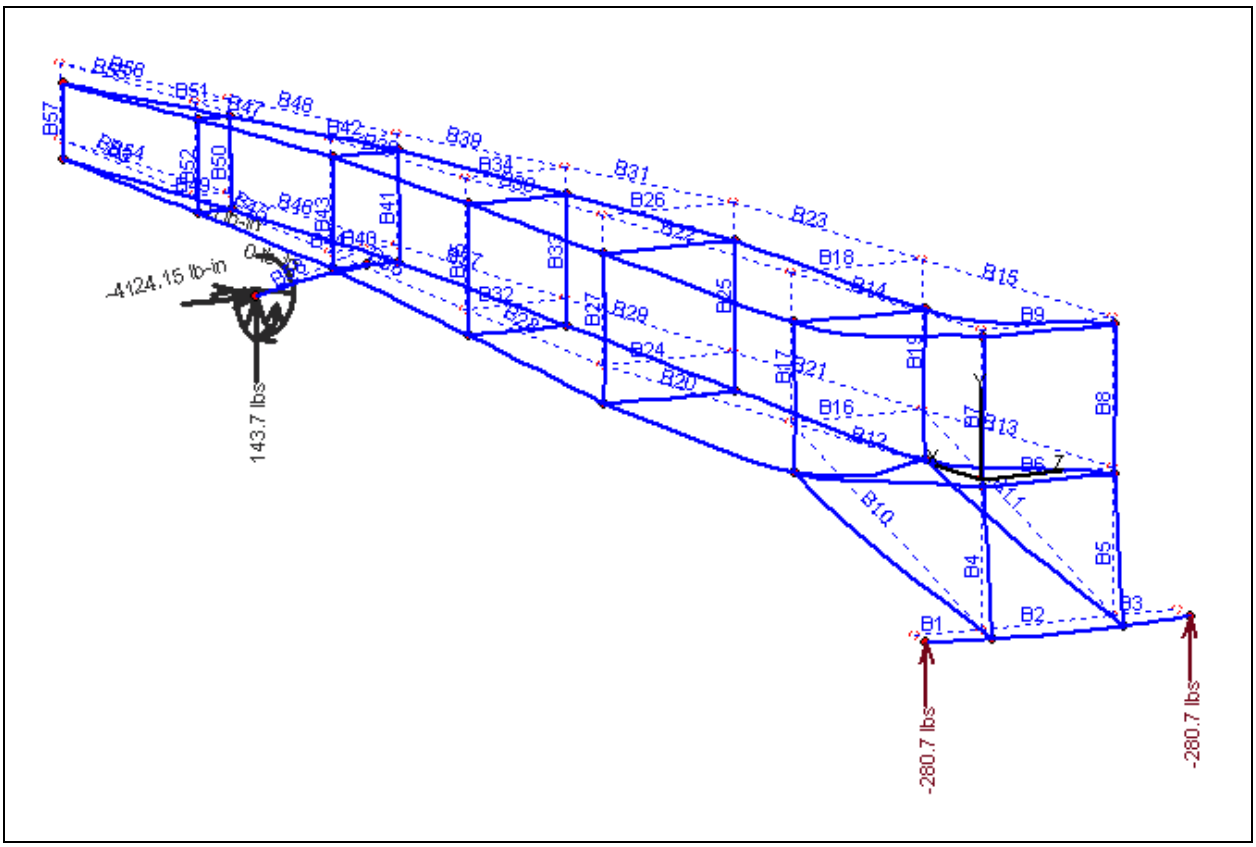


Figure 7. Graph shows the deflection of the frame structure due to the loading. Generated using Virtual Analysis software.

Note: from this graph, we can see that most of the load was exert at the front of the frame. This is because the 300lb load was mainly located in this region. In normal condition, especially in a static condition, there is hardly a 300 lb of force exert on the frame of the plane.

ANSWER:

1.The maximum stresses in each of the beams was calculated as bellow:

Note: The ways of calculate the maximum stress is determined from the maximum internal force in which the maximum value of the axial force was used. If the maximum axial force was determined to be zero, we calculate the maximum stress in the beam that is cause by the bending moment. By using this way, the stresses in each of the beam were determined. It was shown in the following Table 2.

Table 2. Summary of the stresses in each beams.

Member	Maximum Internal Force (lbs)	Direction	Cross Section (in^2)	Maximum Stress (Psi)
B1	280.65	Y	1.767	158.8285229
B2	185.84	X	2.625	70.79619048
B3	-280.65	Y	1.767	-158.8285229
B4	-260.62	X	1.875	-138.9973333
B5	-260.62	X	1.875	-138.9973333
B6	-200.04	X	1.25	-160.032
B7	-142.04	Y	1.875	-75.75466667
B8	-142.04	Y	1.875	-75.75466667
B9	15.0712	X	1	15.0712
B10	-19.01	Y	1	-19.01
B11	-19.01	Y	1	-19.01
B12	140.93	Y	2.25	62.63555556
B13	140.93	Y	2.25	62.63555556
B14	-142.04	X	2.25	-63.12888889
B15	-142.04	X	2.25	-63.12888889
B16	150	Y	1.25	120
B17	-166.65	Y	1	-166.65
B18	-12.01	X	1	-12.01
B19	-116.65	Y	1	-116.65
B20	258.69	X	2.25	114.9733333
B21	258.69	X	2.25	114.9733333
B22	-258.69	X	2.25	-114.9733333
B23	-258.69	X	2.25	-114.9733333
B24	-7.888	X	1.25	-6.3104
B25	101.65	Y	1	101.65
B26	8.9112	X	1	8.9112

B27	101.65	Y	1	101.65
B28	158.15	X	2.25	70.28888889
B29	158.15	X	2.25	70.28888889
B30	-158.24	X	2.25	-70.32888889
B31	-158.24	X	2.25	-70.32888889
B32	3.4119	X	1.25	2.72952
B33	117.47	Y	1	117.47
B34	-4.3192	X	1	-4.3192
B35	117.47	Y	1	117.47
B36	40.5325	X	2.25	18.01444444
B37	40.5325	X	2.25	18.01444444
B38	-40.61	X	2.25	-18.04888889
B39	-40.61	X	2.25	-18.04888889
B40	-71.85	Y	1.25	-57.48
B41	84.9894	Y	1	84.9894
B42	0.8469	X	1	0.8469
B43	84.9894	Y	1	84.9894
B44	71.8485	Y	1.25	57.4788
B45	-45.72	X	2.25	-20.32
B46	-45.72	X	2.25	-20.32
B47	45.615	X	2.25	20.27333333
B48	45.615	X	2.25	20.27333333
B49	-2.3496	X	1.25	-1.87968
B50	-22.65	Y	1	-22.65
B51	2.5951	X	1	2.5951
B52	-22.65	Y	1	-22.65
B53	-22.98	X	2.25	-10.21333333
B54	-22.98	X	2.25	-10.21333333
B55	22.9994	X	2.25	10.22195556
B56	22.9994	X	2.25	10.22195556
B57	-45.52	Y	1	-45.52
B58	-134.22	Y	1.374	-97.68558952

Note: The maximum stress in the frame is on the beams that support the wheels. Which is at a value of 158.82 psi. This is reasonable and can explain why the manufacture uses steel for that beam and use wood for others beams. This is because the steel has a higher yield strength than wood and support this amount of stress.

2. The force exerts on the wheels were calculated and were listed in Table 3.

Table 3. Summary of forces exert on the wheels.

Force on Wheel	Force (lbs)	Direction	Displacement (in)
Wheel 1	-280.6535	Y	-0.3508
Wheel 2	-280.6535	Y	-0.3508

Note 1: The force exert on the wheel was determine to be 280.6535lb. With the assumed tires stiffness of 800lb/inch, the displacement of the reaction point between the wheels and the frame was determine to be –0.3508 inch.

Note 2: The report generated using Virtual Analysis was included in the Appendices.

DISCUSSION:

In doing any structural analysis, the first step is idealization (Abani 1) of the structure. With the assumptions that we made, we greatly simplified the whole structure of Bleriot XI Monoplane. Therefore, the calculation will not be so complicated and the aircraft is easier to model with Visual Analysis. However, when we did all the assumptions, the accuracy of the results are affected directly.

Basically, this software uses the theory of Finite Element Method, which is the displacement type structural analysis method. From the result that we get from our analysis, we can see that the result is reasonable. The maximum stress is located at the beam that connects the two wheels and the frame of the monoplane (B1 & B3). The stress has a value of 158.82 psi. This stress value was obtained base on the simplification that we have made. However, we found that this value of stress is reasonable and it is the maximum stress in all of the beams. This value also suggests that this beam support most of the load and that is why it should be made from steel instead of wood. A steel have a higher yield stress than a wood although it is much dense than the wood.

The minimum stress that we found in the analysis is 0.8469 psi. The beam that supports this stress is located at the top of the structure (B42), which is at the center of the plane. This is also reasonable because most of the load is located at the front and back of the frame. The horizontal arranged beam in the center part of the plane should not have much stress in it. So, we think this result is reasonable.

However, the main assumption of this analysis made this analysis is only an approximated value. Base on this approximation, at least we can see how the load was

distributed in the frame. If ones need a more accurate result, the actual dimension all of the beams and actual loading should be known.

By modeling this aircraft, we learned how to use Visual Analysis software and we found it to be a very powerful tool to use in analysis of structures. It saves a lot of time compare to calculating the reaction of every member in a structure one by one manually. This software also made use of the Finite Element Theory and we can see that this theory is a powerful mathematical tool in structural analysis with the help of a computer.

With the cooperation of each of the group members, we are able to learn this software together and finish the project on time. The learning experience that we gain from this project will surely beneficial us in the future. This project also shows us how can we apply the Finite Element Theory in solving a moderately complicated problem.

CONCLUSION:

In this project, we are able to determine the force exerted on the wheel and the maximum stress in each member by using Visual Analysis software to model the structure of the aircraft. By using manipulation available in the software and assumptions made in each member of the structure, this project was successfully done with the cooperation of each group members.

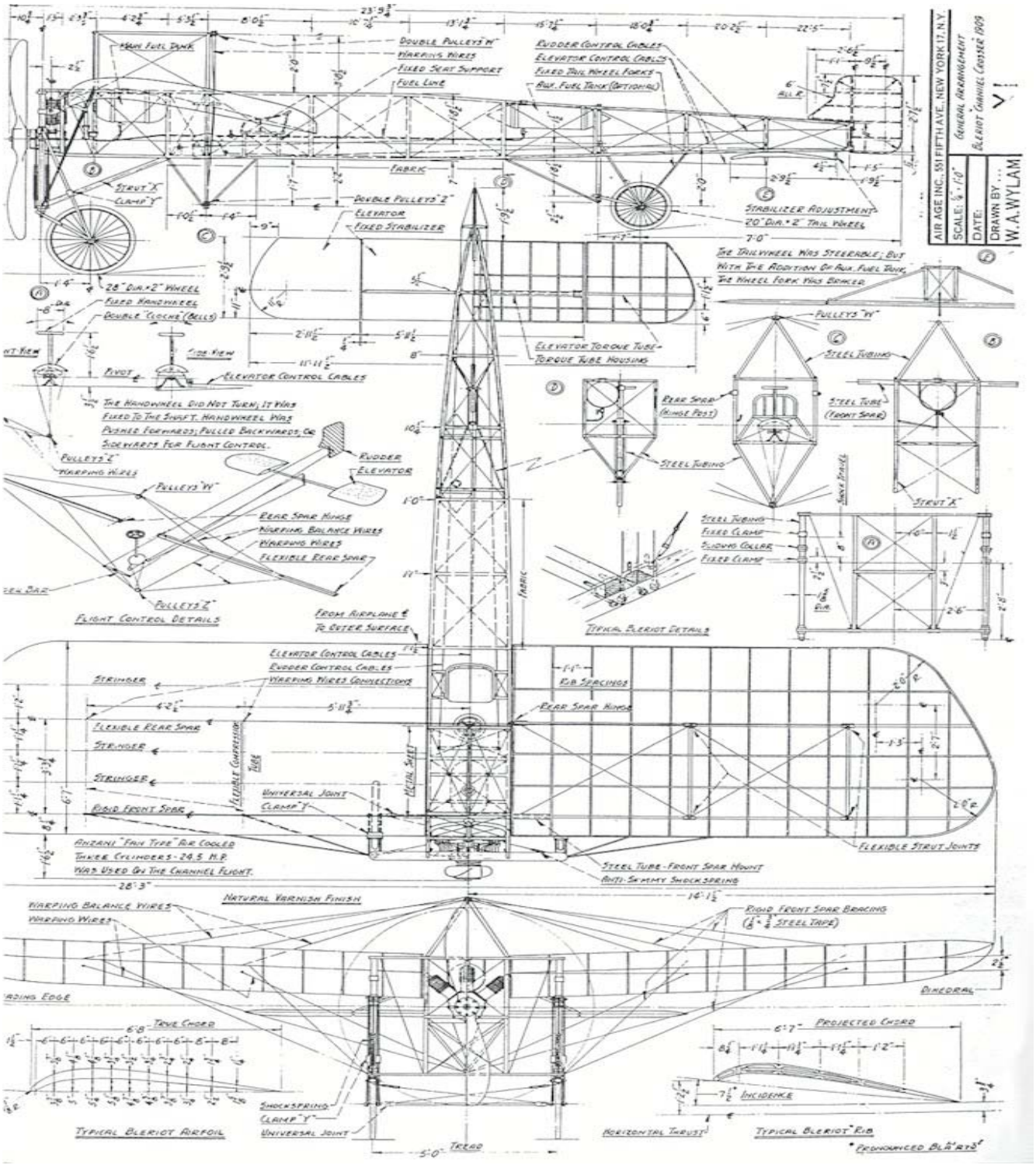
The maximum stress was determine and the force exert on the wheels was also determine. Beside this, we also learn a little about the history of aviation and we learned that Louis Bleriot made the first cross-Channel flight in his XI monoplane. After doing this project, we were explore to the details structure of a monoplane, this give us some brief idea how a plane structure look like. We appreciate this project and we enjoy doing this project.

REFERENCES:

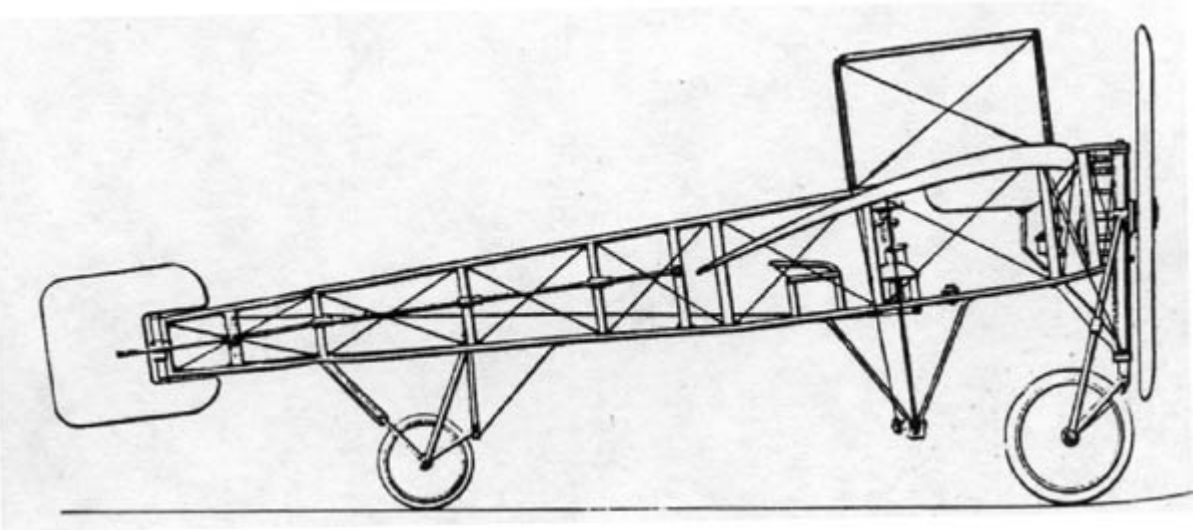
1. http://www.bleriot.org/docs/wylan_plans.htm.
2. http://www.iesweb.com/faq-va.htm#Analysis.
3. Bruce K. Donaldson. 'Analysis of Aircraft Structures, An Introduction'. McGraw-Hill International Edition. 1993.
4. Abani Patra. 'Introduction to the Finite Element Method for Computer Aided Engineering'. (http://www.eng.buffalo.edu/~abani/fem/fem.html) 1999.

APPENDICES:

1. Technical drawing of the Bleriot XI



2. Specification of Bleriot XI.



Blériot XI Specifications:

- Country: France
- Manufacturer: Blériot
- Designation: XI
- Type: Sport
- Production Dates: 1908 to 1914
- Length: 23'-0"
- Wingspan: 25'-9"
- Height: 7'-6"
- Empty Weight: 500 lbs
- Gross Weight: 660 lbs
- Maximum Speed: 45+ mph
- Maximum Range: 50 miles
- Maximum Altitude: 5,000 ft
- Number of Crew: 1
- Engine: Anzani 25 hp, 50-horsepower Gnôme rotary engine

3. Report from Virtual Analysis.

VisualAnalysis 3.50.EDU Report
Project: Project
Company: SUNY at Buffalo
Engineer: HYT,LLF,YHW
Default Units: Inches, Pounds, Degrees, °Celsius, Seconds.

Nodal Displacements

Node	Load Case	DX in	DY in	DZ in	RX deg	RY deg	RZ deg
N1	All	-0.6300	-0.6414	-0.0002	0.0345	-0.0001	-3.9693
N2	″	-0.6300	-0.6414	0.0002	-0.0345	0.0001	-3.9693
N3	″	-0.5541	-0.6402	-0.0016	0.1135	0.0019	-3.0759
N4	″	-0.5541	-0.6402	0.0016	-0.1135	-0.0019	-3.0759
N5	″	-0.6389	-3.7259	-0.0001	-0.5281	0.0073	0.8198
N6	″	-0.6389	-3.7259	0.0001	0.5281	-0.0073	0.8198
N7	″	-0.5452	-3.7260	-0.0001	-0.8110	-0.0041	1.0252
N8	″	-0.5452	-3.7260	0.0001	0.8110	0.0041	1.0252
N9	″	-0.5853	-1.9359	-0.0000	-0.0000	-0.0000	-0.1469
N10	″	-0.5989	-1.9358	0.0000	-0.0000	-0.0000	-0.1390
N11	″	-0.6063	-2.5910	0.0000	-0.4285	0.0110	0.7158
N12	″	-0.6063	-2.5910	-0.0000	0.4285	-0.0110	0.7158
N13	″	-0.5779	-2.5910	-0.0000	-0.1004	-0.0006	0.6760
N14	″	-0.5779	-2.5910	0.0000	0.1004	0.0006	0.6760
N15	″	-0.5780	-1.6617	-0.0000	-0.1511	0.0035	0.1542
N16	″	-0.5780	-1.6617	0.0000	0.1511	-0.0035	0.1542
N17	″	-0.6062	-1.6612	0.0000	-0.6260	-0.0073	0.3233
N18	″	-0.6062	-1.6612	-0.0000	0.6260	0.0073	0.3233
N19	″	-0.5786	-1.7072	-0.0000	0.0012	0.0002	-0.1458
N20	″	-0.5786	-1.7072	0.0000	-0.0012	-0.0002	-0.1458
N21	″	-0.6056	-1.7071	0.0000	-0.1057	-0.0017	-0.1824
N22	″	-0.6056	-1.7071	-0.0000	0.1057	0.0017	-0.1824
N23	″	-0.6332	-4.9465	0.0001	-0.5493	-0.0011	-0.0725
N24	″	-0.6332	-4.9465	-0.0001	0.5493	0.0011	-0.0725
N25	″	-0.5510	-4.9472	-0.0001	3.1709	0.0120	-1.1392
N26	″	-0.5510	-4.9472	0.0001	-3.1709	-0.0120	-1.1392
N27	″	-2.2758	-0.3508	-0.0007	1.5566	0.0063	-5.1963
N28	″	-2.2745	-0.6374	-0.0007	0.9923	0.0063	-5.1963
N29	″	-2.2745	-0.6374	0.0007	-0.9923	-0.0063	-5.1963
N30	″	-2.2758	-0.3508	0.0007	-1.5566	-0.0063	-5.1963
N31	″	-0.6066	-1.5870	-0.0000	-0.0000	-0.0000	3.6034
N32	″	0.0000	-0.0000	-0.0000	-0.0000	-0.0000	0.0000

Nodal Reactions

Node	Load Case	FX lbs	FY lbs	FZ lbs	MX lb-in	MY lb-in	MZ lb-in
N32	All	-0.0000	143.70	0.0000	0.0000	0.0000	-4124.15

Member Internal Forces

Member	Load Case	Offset in	Axial lbs	Vy lbs	Vz lbs	Torsion lb-in	My lb-in	Mz lb-in
B1	All	0.0000	0.0000	280.65	0.0000	0.0000	0.0000	-0.0000
″	″	1.3333	0.0000	280.65	0.0000	0.0000	0.0000	374.20
″	″	2.6667	0.0000	280.65	0.0000	0.0000	0.0000	748.41
″	″	4.0000	0.0000	280.65	0.0000	0.0000	0.0000	1122.61
″	″	5.3333	0.0000	280.65	0.0000	0.0000	0.0000	1496.82
″	″	6.6667	0.0000	280.65	0.0000	0.0000	0.0000	1871.02
″	″	8.0000	0.0000	280.65	0.0000	0.0000	0.0000	2245.23
″	″	9.3333	0.0000	280.65	0.0000	0.0000	0.0000	2619.43
″	″	10.6667	0.0000	280.65	0.0000	0.0000	0.0000	2993.64
″	″	12.0000	0.0000	280.65	0.0000	0.0000	0.0000	3367.84
B2	″	0.0000	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	2.6667	185.84	-0.0000	0.0000	0.0000	29.2422	213.11

″	″	5.3333	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	8.0000	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	10.6667	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	13.3333	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	16.0000	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	18.6667	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	21.3333	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
″	″	24.0000	185.84	-0.0000	0.0000	0.0000	29.2422	213.11
B3	″	0.0000	0.0000	-280.65	0.0000	0.0000	-0.0000	3367.84
″	″	1.3333	0.0000	-280.65	0.0000	0.0000	-0.0000	2993.64
″	″	2.6667	0.0000	-280.65	0.0000	0.0000	-0.0000	2619.43
″	″	4.0000	0.0000	-280.65	0.0000	0.0000	0.0000	2245.23
″	″	5.3333	0.0000	-280.65	0.0000	0.0000	0.0000	1871.02
″	″	6.6667	0.0000	-280.65	0.0000	0.0000	0.0000	1496.82
″	″	8.0000	0.0000	-280.65	0.0000	0.0000	0.0000	1122.61
″	″	9.3333	0.0000	-280.65	0.0000	0.0000	0.0000	748.41
″	″	10.6667	0.0000	-280.65	0.0000	0.0000	0.0000	374.20
″	″	12.0000	0.0000	-280.65	0.0000	0.0000	0.0000	-0.0000
B4	″	0.0000	-260.62	-1.1103	-184.88	-0.7417	1276.16	-149.31
″	″	2.6667	-260.62	-1.1103	-184.88	-0.7417	783.15	-152.27
″	″	5.3333	-260.62	-1.1103	-184.88	-0.7417	290.14	-155.23
″	″	8.0000	-260.62	-1.1103	-184.88	-0.7417	-202.88	-158.19
″	″	10.6667	-260.62	-1.1103	-184.88	-0.7417	-695.89	-161.15
″	″	13.3333	-260.62	-1.1103	-184.88	-0.7417	-1188.91	-164.11
″	″	16.0000	-260.62	-1.1103	-184.88	-0.7417	-1681.92	-167.07
″	″	18.6667	-260.62	-1.1103	-184.88	-0.7417	-2174.94	-170.03
″	″	21.3333	-260.62	-1.1103	-184.88	-0.7417	-2667.95	-173.00
″	″	24.0000	-260.62	-1.1103	-184.88	-0.7417	-3160.96	-175.96
B5	″	0.0000	-260.62	-1.1103	184.88	0.7417	-1276.16	-149.31
″	″	2.6667	-260.62	-1.1103	184.88	0.7417	-783.15	-152.27
″	″	5.3333	-260.62	-1.1103	184.88	0.7417	-290.14	-155.23
″	″	8.0000	-260.62	-1.1103	184.88	0.7417	202.88	-158.19
″	″	10.6667	-260.62	-1.1103	184.88	0.7417	695.89	-161.15
″	″	13.3333	-260.62	-1.1103	184.88	0.7417	1188.91	-164.11
″	″	16.0000	-260.62	-1.1103	184.88	0.7417	1681.92	-167.07
″	″	18.6667	-260.62	-1.1103	184.88	0.7417	2174.94	-170.03
″	″	21.3333	-260.62	-1.1103	184.88	0.7417	2667.95	-173.00
″	″	24.0000	-260.62	-1.1103	184.88	0.7417	3160.96	-175.96
B6	″	0.0000	-200.04	90.0000	0.0000	0.0000	0.0869	-668.99
″	″	2.6667	-200.04	90.0000	0.0000	0.0000	0.0869	-428.99
″	″	5.3333	-200.04	90.0000	0.0000	0.0000	0.0869	-188.99
″	″	8.0000	-200.04	90.0000	0.0000	0.0000	0.0869	51.0092
″	″	10.6667	-200.04	90.0000	0.0000	0.0000	0.0869	291.01
″	″	13.3333	-200.04	-90.00	0.0000	0.0000	0.0869	291.01
″	″	16.0000	-200.04	-90.00	0.0000	0.0000	0.0869	51.0092
″	″	18.6667	-200.04	-90.00	0.0000	0.0000	0.0869	-188.99
″	″	21.3333	-200.04	-90.00	0.0000	0.0000	0.0869	-428.99
″	″	24.0000	-200.04	-90.00	0.0000	0.0000	0.0869	-668.99
B7	″	0.0000	-111.56	-142.04	-15.06	0.1673	306.86	1635.93
″	″	2.6667	-111.56	-142.04	-15.06	0.1673	266.69	1257.17
″	″	5.3333	-111.56	-142.04	-15.06	0.1673	226.53	878.40
″	″	8.0000	-111.56	-142.04	-15.06	0.1673	186.36	499.63
″	″	10.6667	-111.56	-142.04	-15.06	0.1673	146.20	120.86
″	″	13.3333	-111.56	-142.04	-15.06	0.1673	106.03	-257.91
″	″	16.0000	-111.56	-142.04	-15.06	0.1673	65.8646	-636.67
″	″	18.6667	-111.56	-142.04	-15.06	0.1673	25.6992	-1015.44
″	″	21.3333	-111.56	-142.04	-15.06	0.1673	-14.47	-1394.21
″	″	24.0000	-111.56	-142.04	-15.06	0.1673	-54.63	-1772.98
B8	″	0.0000	-111.56	-142.04	-15.06	-0.1673	54.6318	1772.98
″	″	2.6667	-111.56	-142.04	-15.06	-0.1673	14.4663	1394.21
″	″	5.3333	-111.56	-142.04	-15.06	-0.1673	-25.70	1015.44
″	″	8.0000	-111.56	-142.04	-15.06	-0.1673	-65.86	636.67
″	″	10.6667	-111.56	-142.04	-15.06	-0.1673	-106.03	257.91
″	″	13.3333	-111.56	-142.04	-15.06	-0.1673	-146.20	-120.86
″	″	16.0000	-111.56	-142.04	-15.06	-0.1673	-186.36	-499.63
″	″	18.6667	-111.56	-142.04	-15.06	-0.1673	-226.53	-878.40
″	″	21.3333	-111.56	-142.04	-15.06	-0.1673	-266.69	-1257.17
″	″	24.0000	-111.56	-142.04	-15.06	-0.1673	-306.86	-1635.93
B9	″	0.0000	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	2.6667	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	5.3333	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531

″	″	8.0000	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	10.6667	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	13.3333	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	16.0000	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	18.6667	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	21.3333	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
″	″	24.0000	15.0712	0.0000	-0.0000	0.0000	-0.0406	1.2531
B10	″	0.0000	-6.4084	-19.01	0.9580	16.9183	-36.38	1052.55
″	″	7.1802	-6.4084	-19.01	0.9580	16.9183	-29.50	916.05
″	″	14.3604	-6.4084	-19.01	0.9580	16.9183	-22.62	779.55
″	″	21.5407	-6.4084	-19.01	0.9580	16.9183	-15.74	643.05
″	″	28.7209	-6.4084	-19.01	0.9580	16.9183	-8.8660	506.55
″	″	35.9011	-6.4084	-19.01	0.9580	16.9183	-1.9876	370.05
″	″	43.0813	-6.4084	-19.01	0.9580	16.9183	4.8909	233.55
″	″	50.2615	-6.4084	-19.01	0.9580	16.9183	11.7694	97.0464
″	″	57.4418	-6.4084	-19.01	0.9580	16.9183	18.6478	-39.45
″	″	64.6220	-6.4084	-19.01	0.9580	16.9183	25.5263	-175.96
B11	″	0.0000	-6.4084	19.0107	-0.9580	-16.92	25.5263	-175.96
″	″	7.1802	-6.4084	19.0107	-0.9580	-16.92	18.6478	-39.45
″	″	14.3604	-6.4084	19.0107	-0.9580	-16.92	11.7694	97.0464
″	″	21.5407	-6.4084	19.0107	-0.9580	-16.92	4.8909	233.55
″	″	28.7209	-6.4084	19.0107	-0.9580	-16.92	-1.9876	370.05
″	″	35.9011	-6.4084	19.0107	-0.9580	-16.92	-8.8660	506.55
″	″	43.0813	-6.4084	19.0107	-0.9580	-16.92	-15.74	643.05
″	″	50.2615	-6.4084	19.0107	-0.9580	-16.92	-22.62	779.55
″	″	57.4418	-6.4084	19.0107	-0.9580	-16.92	-29.50	916.05
″	″	64.6220	-6.4084	19.0107	-0.9580	-16.92	-36.38	1052.55
B12	″	0.0000	140.93	-59.06	-0.1017	300.32	5.1034	2057.03
″	″	6.6667	140.93	-59.06	-0.1017	300.32	4.4257	1663.29
″	″	13.3333	140.93	-59.06	-0.1017	300.32	3.7480	1269.55
″	″	20.0000	140.93	-59.06	-0.1017	300.32	3.0704	875.81
″	″	26.6667	140.93	-59.06	-0.1017	300.32	2.3927	482.07
″	″	33.3333	140.93	-59.06	-0.1017	300.32	1.7150	88.3316
″	″	40.0000	140.93	-59.06	-0.1017	300.32	1.0373	-305.41
″	″	46.6667	140.93	-59.06	-0.1017	300.32	0.3596	-699.15
″	″	53.3333	140.93	-59.06	-0.1017	300.32	-0.3181	-1092.89
″	″	60.0000	140.93	-59.06	-0.1017	300.32	-0.9958	-1486.62
B13	″	0.0000	140.93	-59.06	0.1017	-300.32	-5.1034	2057.03
″	″	6.6667	140.93	-59.06	0.1017	-300.32	-4.4257	1663.29
″	″	13.3333	140.93	-59.06	0.1017	-300.32	-3.7480	1269.55
″	″	20.0000	140.93	-59.06	0.1017	-300.32	-3.0704	875.81
″	″	26.6667	140.93	-59.06	0.1017	-300.32	-2.3927	482.07
″	″	33.3333	140.93	-59.06	0.1017	-300.32	-1.7150	88.3316
″	″	40.0000	140.93	-59.06	0.1017	-300.32	-1.0373	-305.41
″	″	46.6667	140.93	-59.06	0.1017	-300.32	-0.3596	-699.15
″	″	53.3333	140.93	-59.06	0.1017	-300.32	0.3181	-1092.89
″	″	60.0000	140.93	-59.06	0.1017	-300.32	0.9958	-1486.62
B14	″	0.0000	-142.04	-11.56	0.0091	-53.38	-0.4201	1920.66
″	″	6.6667	-142.04	-22.67	0.0091	-53.38	-0.3593	1805.26
″	″	13.3333	-142.04	-33.78	0.0091	-53.38	-0.2986	1616.53
″	″	20.0000	-142.04	-44.89	0.0091	-53.38	-0.2378	1354.46
″	″	26.6667	-142.04	-56.00	0.0091	-53.38	-0.1771	1019.06
″	″	33.3333	-142.04	-67.12	0.0091	-53.38	-0.1163	608.65
″	″	40.0000	-142.04	-78.23	0.0091	-53.38	-0.0556	123.25
″	″	46.6667	-142.04	-89.34	0.0091	-53.38	0.0052	-435.49
″	″	53.3333	-142.04	-100.45	0.0091	-53.38	0.0659	-1067.57
″	″	60.0000	-142.04	-111.56	0.0091	-53.38	0.1267	-1772.98
B15	″	0.0000	-142.04	-11.56	-0.0091	53.3786	0.4201	1920.66
″	″	6.6667	-142.04	-22.67	-0.0091	53.3786	0.3593	1805.26
″	″	13.3333	-142.04	-33.78	-0.0091	53.3786	0.2986	1616.53
″	″	20.0000	-142.04	-44.89	-0.0091	53.3786	0.2378	1354.46
″	″	26.6667	-142.04	-56.00	-0.0091	53.3786	0.1771	1019.06
″	″	33.3333	-142.04	-67.12	-0.0091	53.3786	0.1163	608.65
″	″	40.0000	-142.04	-78.23	-0.0091	53.3786	0.0556	123.25
″	″	46.6667	-142.04	-89.34	-0.0091	53.3786	-0.0052	-435.49
″	″	53.3333	-142.04	-100.45	-0.0091	53.3786	-0.0659	-1067.57
″	″	60.0000	-142.04	-111.56	-0.0091	53.3786	-0.1267	-1772.98
B16	″	0.0000	10.8128	150.00	0.0000	0.0000	13.6758	-755.88
″	″	2.6667	10.8128	150.00	0.0000	0.0000	13.6758	-355.88
″	″	5.3333	10.8128	150.00	0.0000	0.0000	13.6758	44.1196
″	″	8.0000	10.8128	150.00	0.0000	0.0000	13.6758	444.12

″	″	10.6667	10.8128	150.00	0.0000	0.0000	13.6758	844.12
″	″	13.3333	10.8128	-150.00	0.0000	0.0000	13.6758	844.12
″	″	16.0000	10.8128	-150.00	0.0000	0.0000	13.6758	444.12
″	″	18.6667	10.8128	-150.00	0.0000	0.0000	13.6758	44.1196
″	″	21.3333	10.8128	-150.00	0.0000	0.0000	13.6758	-355.88
″	″	24.0000	10.8128	-150.00	0.0000	0.0000	13.6758	-755.88
B17	″	0.0000	34.8840	-116.65	-11.91	-0.2948	75.2951	1089.52
″	″	2.6667	34.8840	-116.65	-11.91	-0.2948	43.5329	778.45
″	″	5.3333	34.8840	-116.65	-11.91	-0.2948	11.7708	467.38
″	″	8.0000	34.8840	-116.65	-11.91	-0.2948	-19.99	156.31
″	″	10.6667	34.8840	-116.65	-11.91	-0.2948	-51.75	-154.76
″	″	13.3333	34.8840	-116.65	-11.91	-0.2948	-83.52	-465.83
″	″	16.0000	34.8840	-116.65	-11.91	-0.2948	-115.28	-776.91
″	″	18.6667	34.8840	-116.65	-11.91	-0.2948	-147.04	-1087.98
″	″	21.3333	34.8840	-116.65	-11.91	-0.2948	-178.80	-1399.05
″	″	24.0000	34.8840	-116.65	-11.91	-0.2948	-210.56	-1710.12
B18	″	0.0000	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	2.6667	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	5.3333	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	8.0000	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	10.6667	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	13.3333	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	16.0000	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	18.6667	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	21.3333	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
″	″	24.0000	-12.01	0.0000	-0.0000	0.0000	-0.6202	-19.97
B19	″	0.0000	34.8840	-116.65	11.9108	0.2948	-75.30	1089.52
″	″	2.6667	34.8840	-116.65	11.9108	0.2948	-43.53	778.45
″	″	5.3333	34.8840	-116.65	11.9108	0.2948	-11.77	467.38
″	″	8.0000	34.8840	-116.65	11.9108	0.2948	19.9913	156.31
″	″	10.6667	34.8840	-116.65	11.9108	0.2948	51.7535	-154.76
″	″	13.3333	34.8840	-116.65	11.9108	0.2948	83.5156	-465.83
″	″	16.0000	34.8840	-116.65	11.9108	0.2948	115.28	-776.91
″	″	18.6667	34.8840	-116.65	11.9108	0.2948	147.04	-1087.98
″	″	21.3333	34.8840	-116.65	11.9108	0.2948	178.80	-1399.05
″	″	24.0000	34.8840	-116.65	11.9108	0.2948	210.56	-1710.12
B20	″	0.0000	258.69	36.0241	-0.2417	-215.78	6.0805	-761.99
″	″	6.6667	258.69	36.0241	-0.2417	-215.78	4.4693	-521.82
″	″	13.3333	258.69	36.0241	-0.2417	-215.78	2.8581	-281.66
″	″	20.0000	258.69	36.0241	-0.2417	-215.78	1.2468	-41.50
″	″	26.6667	258.69	36.0241	-0.2417	-215.78	-0.3644	198.66
″	″	33.3333	258.69	36.0241	-0.2417	-215.78	-1.9756	438.82
″	″	40.0000	258.69	36.0241	-0.2417	-215.78	-3.5869	678.98
″	″	46.6667	258.69	36.0241	-0.2417	-215.78	-5.1981	919.14
″	″	53.3333	258.69	36.0241	-0.2417	-215.78	-6.8093	1159.30
″	″	60.0000	258.69	36.0241	-0.2417	-215.78	-8.4205	1399.46
B21	″	0.0000	258.69	-36.02	0.2417	215.78	-8.4205	1399.46
″	″	6.6667	258.69	-36.02	0.2417	215.78	-6.8093	1159.30
″	″	13.3333	258.69	-36.02	0.2417	215.78	-5.1981	919.14
″	″	20.0000	258.69	-36.02	0.2417	215.78	-3.5869	678.98
″	″	26.6667	258.69	-36.02	0.2417	215.78	-1.9756	438.82
″	″	33.3333	258.69	-36.02	0.2417	215.78	-0.3644	198.66
″	″	40.0000	258.69	-36.02	0.2417	215.78	1.2468	-41.50
″	″	46.6667	258.69	-36.02	0.2417	215.78	2.8581	-281.66
″	″	53.3333	258.69	-36.02	0.2417	215.78	4.4693	-521.82
″	″	60.0000	258.69	-36.02	0.2417	215.78	6.0805	-761.99
B22	″	0.0000	-258.69	-23.32	-0.0854	1.9430	1.3351	831.13
″	″	6.6667	-258.69	-23.32	-0.0854	1.9430	0.7658	675.64
″	″	13.3333	-258.69	-23.32	-0.0854	1.9430	0.1965	520.14
″	″	20.0000	-258.69	-23.32	-0.0854	1.9430	-0.3728	364.65
″	″	26.6667	-258.69	-23.32	-0.0854	1.9430	-0.9421	209.15
″	″	33.3333	-258.69	-23.32	-0.0854	1.9430	-1.5114	53.6527
″	″	40.0000	-258.69	-23.32	-0.0854	1.9430	-2.0807	-101.84
″	″	46.6667	-258.69	-23.32	-0.0854	1.9430	-2.6500	-257.34
″	″	53.3333	-258.69	-23.32	-0.0854	1.9430	-3.2193	-412.84
″	″	60.0000	-258.69	-23.32	-0.0854	1.9430	-3.7886	-568.33
B23	″	0.0000	-258.69	23.3244	0.0854	-1.9430	-3.7886	-568.33
″	″	6.6667	-258.69	23.3244	0.0854	-1.9430	-3.2193	-412.84
″	″	13.3333	-258.69	23.3244	0.0854	-1.9430	-2.6500	-257.34
″	″	20.0000	-258.69	23.3244	0.0854	-1.9430	-2.0807	-101.84
″	″	26.6667	-258.69	23.3244	0.0854	-1.9430	-1.5114	53.6527

″	″	33.3333	-258.69	23.3244	0.0854	-1.9430	-0.9421	209.15
″	″	40.0000	-258.69	23.3244	0.0854	-1.9430	-0.3728	364.65
″	″	46.6667	-258.69	23.3244	0.0854	-1.9430	0.1965	520.14
″	″	53.3333	-258.69	23.3244	0.0854	-1.9430	0.7658	675.64
″	″	60.0000	-258.69	23.3244	0.0854	-1.9430	1.3351	831.13
B24	″	0.0000	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	2.6667	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	5.3333	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	8.0000	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	10.6667	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	13.3333	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	16.0000	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	18.6667	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	21.3333	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
″	″	24.0000	-7.8888	-0.0000	0.0000	0.0000	4.6480	36.8605
B25	″	0.0000	7.0492	101.65	1.2893	-0.0714	8.8735	-1160.01
″	″	2.6667	7.0492	101.65	1.2893	-0.0714	12.3115	-888.95
″	″	5.3333	7.0492	101.65	1.2893	-0.0714	15.7495	-617.89
″	″	8.0000	7.0492	101.65	1.2893	-0.0714	19.1875	-346.84
″	″	10.6667	7.0492	101.65	1.2893	-0.0714	22.6255	-75.78
″	″	13.3333	7.0492	101.65	1.2893	-0.0714	26.0636	195.28
″	″	16.0000	7.0492	101.65	1.2893	-0.0714	29.5016	466.34
″	″	18.6667	7.0492	101.65	1.2893	-0.0714	32.9396	737.40
″	″	21.3333	7.0492	101.65	1.2893	-0.0714	36.3776	1008.45
″	″	24.0000	7.0492	101.65	1.2893	-0.0714	39.8156	1279.51
B26	″	0.0000	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	2.6667	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	5.3333	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	8.0000	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	10.6667	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	13.3333	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	16.0000	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	18.6667	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	21.3333	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
″	″	24.0000	8.9112	0.0000	-0.0000	0.0000	-4.2262	-19.20
B27	″	0.0000	7.0492	101.65	-1.2893	0.0714	-8.8735	-1160.01
″	″	2.6667	7.0492	101.65	-1.2893	0.0714	-12.31	-888.95
″	″	5.3333	7.0492	101.65	-1.2893	0.0714	-15.75	-617.89
″	″	8.0000	7.0492	101.65	-1.2893	0.0714	-19.19	-346.84
″	″	10.6667	7.0492	101.65	-1.2893	0.0714	-22.63	-75.78
″	″	13.3333	7.0492	101.65	-1.2893	0.0714	-26.06	195.28
″	″	16.0000	7.0492	101.65	-1.2893	0.0714	-29.50	466.34
″	″	18.6667	7.0492	101.65	-1.2893	0.0714	-32.94	737.40
″	″	21.3333	7.0492	101.65	-1.2893	0.0714	-36.38	1008.45
″	″	24.0000	7.0492	101.65	-1.2893	0.0714	-39.82	1279.51
B28	″	0.0000	158.15	24.0564	0.3947	-106.17	-5.0161	-632.33
″	″	5.3463	158.15	24.0564	0.3947	-106.17	-2.9062	-503.71
″	″	10.6927	158.15	24.0564	0.3947	-106.17	-0.7962	-375.10
″	″	16.0390	158.15	24.0564	0.3947	-106.17	1.3138	-246.49
″	″	21.3854	158.15	24.0564	0.3947	-106.17	3.4237	-117.87
″	″	26.7317	158.15	24.0564	0.3947	-106.17	5.5337	10.7412
″	″	32.0780	158.15	24.0564	0.3947	-106.17	7.6436	139.35
″	″	37.4244	158.15	24.0564	0.3947	-106.17	9.7536	267.97
″	″	42.7707	158.15	24.0564	0.3947	-106.17	11.8636	396.58
″	″	48.1170	158.15	24.0564	0.3947	-106.17	13.9735	525.20
B29	″	0.0000	158.15	-24.06	-0.3947	106.17	13.9735	525.20
″	″	5.3463	158.15	-24.06	-0.3947	106.17	11.8636	396.58
″	″	10.6927	158.15	-24.06	-0.3947	106.17	9.7536	267.97
″	″	16.0390	158.15	-24.06	-0.3947	106.17	7.6436	139.35
″	″	21.3854	158.15	-24.06	-0.3947	106.17	5.5337	10.7412
″	″	26.7317	158.15	-24.06	-0.3947	106.17	3.4237	-117.87
″	″	32.0780	158.15	-24.06	-0.3947	106.17	1.3138	-246.49
″	″	37.4244	158.15	-24.06	-0.3947	106.17	-0.7962	-375.10
″	″	42.7707	158.15	-24.06	-0.3947	106.17	-2.9062	-503.71
″	″	48.1170	158.15	-24.06	-0.3947	106.17	-5.0161	-632.33
B30	″	0.0000	-158.24	-25.45	0.2993	10.5703	-8.4198	592.16
″	″	5.3463	-158.24	-25.45	0.2993	10.5703	-6.8195	456.08
″	″	10.6927	-158.24	-25.45	0.2993	10.5703	-5.2192	319.99
″	″	16.0390	-158.24	-25.45	0.2993	10.5703	-3.6188	183.91
″	″	21.3854	-158.24	-25.45	0.2993	10.5703	-2.0185	47.8329
″	″	26.7317	-158.24	-25.45	0.2993	10.5703	-0.4181	-88.25

″	″	32.0780	-158.24	-25.45	0.2993	10.5703	1.1822	-224.33
″	″	37.4244	-158.24	-25.45	0.2993	10.5703	2.7826	-360.41
″	″	42.7707	-158.24	-25.45	0.2993	10.5703	4.3829	-496.49
″	″	48.1170	-158.24	-25.45	0.2993	10.5703	5.9833	-632.57
B31	″	0.0000	-158.24	-25.45	-0.2993	-10.57	8.4198	592.16
″	″	5.3463	-158.24	-25.45	-0.2993	-10.57	6.8195	456.08
″	″	10.6927	-158.24	-25.45	-0.2993	-10.57	5.2192	319.99
″	″	16.0390	-158.24	-25.45	-0.2993	-10.57	3.6188	183.91
″	″	21.3854	-158.24	-25.45	-0.2993	-10.57	2.0185	47.8329
″	″	26.7317	-158.24	-25.45	-0.2993	-10.57	0.4181	-88.25
″	″	32.0780	-158.24	-25.45	-0.2993	-10.57	-1.1822	-224.33
″	″	37.4244	-158.24	-25.45	-0.2993	-10.57	-2.7826	-360.41
″	″	42.7707	-158.24	-25.45	-0.2993	-10.57	-4.3829	-496.49
″	″	48.1170	-158.24	-25.45	-0.2993	-10.57	-5.9833	-632.57
B32	″	0.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	2.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	4.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	6.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	8.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	10.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	12.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	14.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	16.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
″	″	18.0000	3.4119	0.0000	0.0000	-0.0000	0.8467	-6.0874
B33	″	0.0000	0.8683	117.47	-3.1419	-0.2973	39.8059	-1246.66
″	″	2.3333	0.8683	117.47	-3.1419	-0.2973	32.4748	-972.56
″	″	4.6667	0.8683	117.47	-3.1419	-0.2973	25.1438	-698.47
″	″	7.0000	0.8683	117.47	-3.1419	-0.2973	17.8128	-424.37
″	″	9.3333	0.8683	117.47	-3.1419	-0.2973	10.4818	-150.28
″	″	11.6667	0.8683	117.47	-3.1419	-0.2973	3.1508	123.82
″	″	14.0000	0.8683	117.47	-3.1419	-0.2973	-4.1802	397.91
″	″	16.3333	0.8683	117.47	-3.1419	-0.2973	-11.51	672.01
″	″	18.6667	0.8683	117.47	-3.1419	-0.2973	-18.84	946.10
″	″	21.0000	0.8683	117.47	-3.1419	-0.2973	-26.17	1220.20
B34	″	0.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	2.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	4.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	6.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	8.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	10.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	12.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	14.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	16.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
″	″	18.0000	-4.3592	0.0000	-0.0000	-0.0000	-8.5371	-20.77
B35	″	0.0000	0.8683	117.47	3.1419	0.2973	-39.81	-1246.66
″	″	2.3333	0.8683	117.47	3.1419	0.2973	-32.47	-972.56
″	″	4.6667	0.8683	117.47	3.1419	0.2973	-25.14	-698.47
″	″	7.0000	0.8683	117.47	3.1419	0.2973	-17.81	-424.37
″	″	9.3333	0.8683	117.47	3.1419	0.2973	-10.48	-150.28
″	″	11.6667	0.8683	117.47	3.1419	0.2973	-3.1508	123.82
″	″	14.0000	0.8683	117.47	3.1419	0.2973	4.1802	397.91
″	″	16.3333	0.8683	117.47	3.1419	0.2973	11.5112	672.01
″	″	18.6667	0.8683	117.47	3.1419	0.2973	18.8422	946.10
″	″	21.0000	0.8683	117.47	3.1419	0.2973	26.1733	1220.20
B36	″	0.0000	40.5325	26.8561	-0.3919	-62.31	11.3273	-704.73
″	″	5.3463	40.5325	26.8561	-0.3919	-62.31	9.2322	-561.15
″	″	10.6927	40.5325	26.8561	-0.3919	-62.31	7.1371	-417.57
″	″	16.0390	40.5325	26.8561	-0.3919	-62.31	5.0420	-273.98
″	″	21.3854	40.5325	26.8561	-0.3919	-62.31	2.9469	-130.40
″	″	26.7317	40.5325	26.8561	-0.3919	-62.31	0.8518	13.1793
″	″	32.0780	40.5325	26.8561	-0.3919	-62.31	-1.2433	156.76
″	″	37.4244	40.5325	26.8561	-0.3919	-62.31	-3.3384	300.34
″	″	42.7707	40.5325	26.8561	-0.3919	-62.31	-5.4335	443.92
″	″	48.1170	40.5325	26.8561	-0.3919	-62.31	-7.5286	587.51
B37	″	0.0000	40.5325	-26.86	0.3919	62.3086	-7.5286	587.51
″	″	5.3463	40.5325	-26.86	0.3919	62.3086	-5.4335	443.92
″	″	10.6927	40.5325	-26.86	0.3919	62.3086	-3.3384	300.34
″	″	16.0390	40.5325	-26.86	0.3919	62.3086	-1.2433	156.76
″	″	21.3854	40.5325	-26.86	0.3919	62.3086	0.8518	13.1793
″	″	26.7317	40.5325	-26.86	0.3919	62.3086	2.9469	-130.40
″	″	32.0780	40.5325	-26.86	0.3919	62.3086	5.0420	-273.98

″	″	37.4244	40.5325	-26.86	0.3919	62.3086	7.1371	-417.57
″	″	42.7707	40.5325	-26.86	0.3919	62.3086	9.2322	-561.15
″	″	48.1170	40.5325	-26.86	0.3919	62.3086	11.3273	-704.73
B38	″	0.0000	-40.61	-29.99	0.1404	27.5882	-3.3863	615.44
″	″	5.3463	-40.61	-29.99	0.1404	27.5882	-2.6355	455.10
″	″	10.6927	-40.61	-29.99	0.1404	27.5882	-1.8847	294.76
″	″	16.0390	-40.61	-29.99	0.1404	27.5882	-1.1339	134.42
″	″	21.3854	-40.61	-29.99	0.1404	27.5882	-0.3831	-25.92
″	″	26.7317	-40.61	-29.99	0.1404	27.5882	0.3677	-186.26
″	″	32.0780	-40.61	-29.99	0.1404	27.5882	1.1185	-346.60
″	″	37.4244	-40.61	-29.99	0.1404	27.5882	1.8693	-506.94
″	″	42.7707	-40.61	-29.99	0.1404	27.5882	2.6201	-667.27
″	″	48.1170	-40.61	-29.99	0.1404	27.5882	3.3709	-827.61
B39	″	0.0000	-40.61	-29.99	-0.1404	-27.59	3.3863	615.44
″	″	5.3463	-40.61	-29.99	-0.1404	-27.59	2.6355	455.10
″	″	10.6927	-40.61	-29.99	-0.1404	-27.59	1.8847	294.76
″	″	16.0390	-40.61	-29.99	-0.1404	-27.59	1.1339	134.42
″	″	21.3854	-40.61	-29.99	-0.1404	-27.59	0.3831	-25.92
″	″	26.7317	-40.61	-29.99	-0.1404	-27.59	-0.3677	-186.26
″	″	32.0780	-40.61	-29.99	-0.1404	-27.59	-1.1185	-346.60
″	″	37.4244	-40.61	-29.99	-0.1404	-27.59	-1.8693	-506.94
″	″	42.7707	-40.61	-29.99	-0.1404	-27.59	-2.6201	-667.27
″	″	48.1170	-40.61	-29.99	-0.1404	-27.59	-3.3709	-827.61
B40	″	0.0000	-0.8823	-71.85	-0.0000	-380.78	16.4910	158.64
″	″	0.6667	-0.8823	-71.85	-0.0000	-380.78	16.4910	110.74
″	″	1.3333	-0.8823	-71.85	-0.0000	-380.78	16.4910	62.8420
″	″	2.0000	-0.8823	-71.85	-0.0000	-380.78	16.4910	14.9429
″	″	2.6667	-0.8823	-71.85	-0.0000	-380.78	16.4910	-32.96
″	″	3.3333	-0.8823	-71.85	-0.0000	-380.78	16.4910	-80.86
″	″	4.0000	-0.8823	-71.85	-0.0000	-380.78	16.4910	-128.75
″	″	4.6667	-0.8823	-71.85	-0.0000	-380.78	16.4910	-176.65
″	″	5.3333	-0.8823	-71.85	-0.0000	-380.78	16.4910	-224.55
″	″	6.0000	-0.8823	-71.85	-0.0000	-380.78	16.4910	-272.45
B41	″	0.0000	-35.55	84.9894	-6.2788	-0.3228	44.9966	-699.33
″	″	2.0000	-35.55	84.9894	-6.2788	-0.3228	32.4391	-529.35
″	″	4.0000	-35.55	84.9894	-6.2788	-0.3228	19.8816	-359.37
″	″	6.0000	-35.55	84.9894	-6.2788	-0.3228	7.3241	-189.39
″	″	8.0000	-35.55	84.9894	-6.2788	-0.3228	-5.2334	-19.41
″	″	10.0000	-35.55	84.9894	-6.2788	-0.3228	-17.79	150.56
″	″	12.0000	-35.55	84.9894	-6.2788	-0.3228	-30.35	320.54
″	″	14.0000	-35.55	84.9894	-6.2788	-0.3228	-42.91	490.52
″	″	16.0000	-35.55	84.9894	-6.2788	-0.3228	-55.46	660.50
″	″	18.0000	-35.55	84.9894	-6.2788	-0.3228	-68.02	830.48
B42	″	0.0000	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	1.3333	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	2.6667	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	4.0000	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	5.3333	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	6.6667	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	8.0000	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	9.3333	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	10.6667	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
″	″	12.0000	0.8469	-0.0000	-0.0000	-0.0000	-4.0776	-10.99
B43	″	0.0000	-35.55	84.9894	6.2788	0.3228	-45.00	-699.33
″	″	2.0000	-35.55	84.9894	6.2788	0.3228	-32.44	-529.35
″	″	4.0000	-35.55	84.9894	6.2788	0.3228	-19.88	-359.37
″	″	6.0000	-35.55	84.9894	6.2788	0.3228	-7.3241	-189.39
″	″	8.0000	-35.55	84.9894	6.2788	0.3228	5.2334	-19.41
″	″	10.0000	-35.55	84.9894	6.2788	0.3228	17.7909	150.56
″	″	12.0000	-35.55	84.9894	6.2788	0.3228	30.3485	320.54
″	″	14.0000	-35.55	84.9894	6.2788	0.3228	42.9060	490.52
″	″	16.0000	-35.55	84.9894	6.2788	0.3228	55.4635	660.50
″	″	18.0000	-35.55	84.9894	6.2788	0.3228	68.0210	830.48
B44	″	0.0000	-0.8823	71.8485	-0.0000	380.78	16.4910	-272.45
″	″	0.6667	-0.8823	71.8485	-0.0000	380.78	16.4910	-224.55
″	″	1.3333	-0.8823	71.8485	-0.0000	380.78	16.4910	-176.65
″	″	2.0000	-0.8823	71.8485	-0.0000	380.78	16.4910	-128.75
″	″	2.6667	-0.8823	71.8485	-0.0000	380.78	16.4910	-80.86
″	″	3.3333	-0.8823	71.8485	-0.0000	380.78	16.4910	-32.96
″	″	4.0000	-0.8823	71.8485	-0.0000	380.78	16.4910	14.9429
″	″	4.6667	-0.8823	71.8485	-0.0000	380.78	16.4910	62.8420

″	″	5.3333	-0.8823	71.8485	-0.0000	380.78	16.4910	110.74
″	″	6.0000	-0.8823	71.8485	-0.0000	380.78	16.4910	158.64
B45	″	0.0000	-45.72	-6.7718	-0.3074	55.6039	5.6183	64.2828
″	″	5.3463	-45.72	-6.7718	-0.3074	55.6039	3.9749	28.0785
″	″	10.6927	-45.72	-6.7718	-0.3074	55.6039	2.3315	-8.1257
″	″	16.0390	-45.72	-6.7718	-0.3074	55.6039	0.6881	-44.33
″	″	21.3854	-45.72	-6.7718	-0.3074	55.6039	-0.9553	-80.53
″	″	26.7317	-45.72	-6.7718	-0.3074	55.6039	-2.5987	-116.74
″	″	32.0780	-45.72	-6.7718	-0.3074	55.6039	-4.2421	-152.94
″	″	37.4244	-45.72	-6.7718	-0.3074	55.6039	-5.8855	-189.15
″	″	42.7707	-45.72	-6.7718	-0.3074	55.6039	-7.5289	-225.35
″	″	48.1170	-45.72	-6.7718	-0.3074	55.6039	-9.1723	-261.56
B46	″	0.0000	-45.72	6.7718	0.3074	-55.60	-9.1723	-261.56
″	″	5.3463	-45.72	6.7718	0.3074	-55.60	-7.5289	-225.35
″	″	10.6927	-45.72	6.7718	0.3074	-55.60	-5.8855	-189.15
″	″	16.0390	-45.72	6.7718	0.3074	-55.60	-4.2421	-152.94
″	″	21.3854	-45.72	6.7718	0.3074	-55.60	-2.5987	-116.74
″	″	26.7317	-45.72	6.7718	0.3074	-55.60	-0.9553	-80.53
″	″	32.0780	-45.72	6.7718	0.3074	-55.60	0.6881	-44.33
″	″	37.4244	-45.72	6.7718	0.3074	-55.60	2.3315	-8.1257
″	″	42.7707	-45.72	6.7718	0.3074	-55.60	3.9749	28.0785
″	″	48.1170	-45.72	6.7718	0.3074	-55.60	5.6183	64.2828
B47	″	0.0000	45.6150	2.8857	0.0206	15.2046	-0.6454	-126.15
″	″	5.3463	45.6150	2.8857	0.0206	15.2046	-0.5351	-110.72
″	″	10.6927	45.6150	2.8857	0.0206	15.2046	-0.4247	-95.30
″	″	16.0390	45.6150	2.8857	0.0206	15.2046	-0.3144	-79.87
″	″	21.3854	45.6150	2.8857	0.0206	15.2046	-0.2041	-64.44
″	″	26.7317	45.6150	2.8857	0.0206	15.2046	-0.0937	-49.01
″	″	32.0780	45.6150	2.8857	0.0206	15.2046	0.0166	-33.59
″	″	37.4244	45.6150	2.8857	0.0206	15.2046	0.1269	-18.16
″	″	42.7707	45.6150	2.8857	0.0206	15.2046	0.2372	-2.7302
″	″	48.1170	45.6150	2.8857	0.0206	15.2046	0.3476	12.6977
B48	″	0.0000	45.6150	2.8857	-0.0206	-15.20	0.6454	-126.15
″	″	5.3463	45.6150	2.8857	-0.0206	-15.20	0.5351	-110.72
″	″	10.6927	45.6150	2.8857	-0.0206	-15.20	0.4247	-95.30
″	″	16.0390	45.6150	2.8857	-0.0206	-15.20	0.3144	-79.87
″	″	21.3854	45.6150	2.8857	-0.0206	-15.20	0.2041	-64.44
″	″	26.7317	45.6150	2.8857	-0.0206	-15.20	0.0937	-49.01
″	″	32.0780	45.6150	2.8857	-0.0206	-15.20	-0.0166	-33.59
″	″	37.4244	45.6150	2.8857	-0.0206	-15.20	-0.1269	-18.16
″	″	42.7707	45.6150	2.8857	-0.0206	-15.20	-0.2372	-2.7302
″	″	48.1170	45.6150	2.8857	-0.0206	-15.20	-0.3476	12.6977
B49	″	0.0000	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	0.6667	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	1.3333	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	2.0000	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	2.6667	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	3.3333	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	4.0000	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	4.6667	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	5.3333	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
″	″	6.0000	-2.3496	0.0000	0.0000	0.0000	7.8468	-19.22
B50	″	0.0000	-2.1987	-22.65	-1.2147	-0.0678	5.9998	152.87
″	″	1.6667	-2.1987	-22.65	-1.2147	-0.0678	3.9752	115.11
″	″	3.3333	-2.1987	-22.65	-1.2147	-0.0678	1.9507	77.3543
″	″	5.0000	-2.1987	-22.65	-1.2147	-0.0678	-0.0739	39.5989
″	″	6.6667	-2.1987	-22.65	-1.2147	-0.0678	-2.0985	1.8435
″	″	8.3333	-2.1987	-22.65	-1.2147	-0.0678	-4.1231	-35.91
″	″	10.0000	-2.1987	-22.65	-1.2147	-0.0678	-6.1477	-73.67
″	″	11.6667	-2.1987	-22.65	-1.2147	-0.0678	-8.1722	-111.42
″	″	13.3333	-2.1987	-22.65	-1.2147	-0.0678	-10.20	-149.18
″	″	15.0000	-2.1987	-22.65	-1.2147	-0.0678	-12.22	-186.93
B51	″	0.0000	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	0.6667	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	1.3333	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	2.0000	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	2.6667	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	3.3333	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	4.0000	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	4.6667	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
″	″	5.3333	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786

″	″	6.0000	2.5951	0.0000	-0.0000	0.0000	-0.3675	0.1786
B52	″	0.0000	-2.1987	-22.65	1.2147	0.0678	-5.9998	152.87
″	″	1.6667	-2.1987	-22.65	1.2147	0.0678	-3.9752	115.11
″	″	3.3333	-2.1987	-22.65	1.2147	0.0678	-1.9507	77.3543
″	″	5.0000	-2.1987	-22.65	1.2147	0.0678	0.0739	39.5989
″	″	6.6667	-2.1987	-22.65	1.2147	0.0678	2.0985	1.8435
″	″	8.3333	-2.1987	-22.65	1.2147	0.0678	4.1231	-35.91
″	″	10.0000	-2.1987	-22.65	1.2147	0.0678	6.1477	-73.67
″	″	11.6667	-2.1987	-22.65	1.2147	0.0678	8.1722	-111.42
″	″	13.3333	-2.1987	-22.65	1.2147	0.0678	10.1968	-149.18
″	″	15.0000	-2.1987	-22.65	1.2147	0.0678	12.2214	-186.93
B53	″	0.0000	-22.98	-5.2811	-0.0269	12.3382	0.3456	133.79
″	″	5.3463	-22.98	-5.2811	-0.0269	12.3382	0.2016	105.55
″	″	10.6927	-22.98	-5.2811	-0.0269	12.3382	0.0575	77.3179
″	″	16.0390	-22.98	-5.2811	-0.0269	12.3382	-0.0865	49.0831
″	″	21.3854	-22.98	-5.2811	-0.0269	12.3382	-0.2306	20.8483
″	″	26.7317	-22.98	-5.2811	-0.0269	12.3382	-0.3746	-7.3865
″	″	32.0780	-22.98	-5.2811	-0.0269	12.3382	-0.5187	-35.62
″	″	37.4244	-22.98	-5.2811	-0.0269	12.3382	-0.6627	-63.86
″	″	42.7707	-22.98	-5.2811	-0.0269	12.3382	-0.8068	-92.09
″	″	48.1170	-22.98	-5.2811	-0.0269	12.3382	-0.9508	-120.33
B54	″	0.0000	-22.98	5.2811	0.0269	-12.34	-0.9508	-120.33
″	″	5.3463	-22.98	5.2811	0.0269	-12.34	-0.8068	-92.09
″	″	10.6927	-22.98	5.2811	0.0269	-12.34	-0.6627	-63.86
″	″	16.0390	-22.98	5.2811	0.0269	-12.34	-0.5187	-35.62
″	″	21.3854	-22.98	5.2811	0.0269	-12.34	-0.3746	-7.3865
″	″	26.7317	-22.98	5.2811	0.0269	-12.34	-0.2306	20.8483
″	″	32.0780	-22.98	5.2811	0.0269	-12.34	-0.0865	49.0831
″	″	37.4244	-22.98	5.2811	0.0269	-12.34	0.0575	77.3179
″	″	42.7707	-22.98	5.2811	0.0269	-12.34	0.2016	105.55
″	″	48.1170	-22.98	5.2811	0.0269	-12.34	0.3456	133.79
B55	″	0.0000	22.9994	5.7909	-0.0147	-0.1469	0.3909	-139.51
″	″	5.3463	22.9994	5.7909	-0.0147	-0.1469	0.3121	-108.55
″	″	10.6927	22.9994	5.7909	-0.0147	-0.1469	0.2333	-77.59
″	″	16.0390	22.9994	5.7909	-0.0147	-0.1469	0.1545	-46.63
″	″	21.3854	22.9994	5.7909	-0.0147	-0.1469	0.0758	-15.67
″	″	26.7317	22.9994	5.7909	-0.0147	-0.1469	-0.0030	15.2926
″	″	32.0780	22.9994	5.7909	-0.0147	-0.1469	-0.0818	46.2524
″	″	37.4244	22.9994	5.7909	-0.0147	-0.1469	-0.1605	77.2123
″	″	42.7707	22.9994	5.7909	-0.0147	-0.1469	-0.2393	108.17
″	″	48.1170	22.9994	5.7909	-0.0147	-0.1469	-0.3181	139.13
B56	″	0.0000	22.9994	5.7909	0.0147	0.1469	-0.3909	-139.51
″	″	5.3463	22.9994	5.7909	0.0147	0.1469	-0.3121	-108.55
″	″	10.6927	22.9994	5.7909	0.0147	0.1469	-0.2333	-77.59
″	″	16.0390	22.9994	5.7909	0.0147	0.1469	-0.1545	-46.63
″	″	21.3854	22.9994	5.7909	0.0147	0.1469	-0.0758	-15.67
″	″	26.7317	22.9994	5.7909	0.0147	0.1469	0.0030	15.2926
″	″	32.0780	22.9994	5.7909	0.0147	0.1469	0.0818	46.2524
″	″	37.4244	22.9994	5.7909	0.0147	0.1469	0.1605	77.2123
″	″	42.7707	22.9994	5.7909	0.0147	0.1469	0.2393	108.17
″	″	48.1170	22.9994	5.7909	0.0147	0.1469	0.3181	139.13
B57	″	0.0000	-11.99	-45.52	-0.0000	0.0000	0.0000	277.70
″	″	1.3333	-11.99	-45.52	-0.0000	0.0000	0.0000	217.01
″	″	2.6667	-11.99	-45.52	-0.0000	0.0000	0.0000	156.31
″	″	4.0000	-11.99	-45.52	-0.0000	0.0000	0.0000	95.6063
″	″	5.3333	-11.99	-45.52	-0.0000	0.0000	0.0000	34.9068
″	″	6.6667	-11.99	-45.52	-0.0000	0.0000	0.0000	-25.79
″	″	8.0000	-11.99	-45.52	-0.0000	0.0000	0.0000	-86.49
″	″	9.3333	-11.99	-45.52	-0.0000	0.0000	0.0000	-147.19
″	″	10.6667	-11.99	-45.52	-0.0000	0.0000	0.0000	-207.89
″	″	12.0000	-11.99	-45.52	-0.0000	0.0000	0.0000	-268.59
B58	″	0.0000	-51.32	-134.22	-0.0000	0.0000	-0.0000	761.55
″	″	4.0445	-51.32	-134.22	-0.0000	0.0000	-0.0000	218.70
″	″	8.0890	-51.32	-134.22	-0.0000	0.0000	-0.0000	-324.16
″	″	12.1335	-51.32	-134.22	-0.0000	0.0000	-0.0000	-867.01
″	″	16.1780	-51.32	-134.22	-0.0000	0.0000	-0.0000	-1409.87
″	″	20.2225	-51.32	-134.22	-0.0000	0.0000	-0.0000	-1952.72
″	″	24.2670	-51.32	-134.22	-0.0000	0.0000	-0.0000	-2495.58
″	″	28.3115	-51.32	-134.22	-0.0000	0.0000	-0.0000	-3038.44
″	″	32.3560	-51.32	-134.22	-0.0000	0.0000	-0.0000	-3581.29
″	″	36.4005	-51.32	-134.22	-0.0000	0.0000	-0.0000	-4124.15

Spring Results

Spring	Load Case	Force	Displacement
Tire 1	All	-280.6535 lbs	-0.3508 in
Tire 2	”	-280.6535 lbs	-0.3508 in