

'ScV13e inneres Gitter

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'Knoten x y z Einheiten: Meter, Skalierung: 7.98m =

111.72 Einheiten

Knoten	x	y	z
' Profil Sc0			
1	0	0	.6981
2	15.0808	0	10.7284
3	15.0808	0	-10.22915
4	55.0892	0	5.4866
5	55.0892	0	-16.86675
6	102.2798	0	-9.5107
' Profil Sc1			
7	9.2145	15.96	1.3963
8	23.3027	15.96	6.43515
9	23.3027	15.96	-7.26255
10	59.9753	15.96	3.0174
11	59.9753	15.96	-10.11725
12	85.2687	15.96	-4.7229
' Profil Sc2			
13	18.4315	31.92	2.1067
14	31.7926	31.92	8.55535
15	31.7926	31.92	-2.7296
16	64.8766	31.92	3.89015
17	64.8766	31.92	-4.56305
18	80.5877	31.92	-1.1632
' Profil Sc3			
19	27.6427	47.88	3.2449
20	40.5251	47.88	11.14083333
21	40.5251	47.88	1.3209
22	69.6817	47.88	6.2598
23	69.6817	47.88	0.3473
24	82.2154	47.88	2.8878
' Profil Sc4			
25	36.8589	63.84	3.8881
26	48.9217	63.84	10.9582
27	48.9217	63.84	2.35595
28	74.5831	63.84	6.621033333
29	74.5831	63.84	1.402
30	86.3339	63.84	3.577
' Profil Sc5			
31	46.0723	79.8	1.5674
32	57.5909	79.8	8.097033333
33	57.5909	79.8	0.6977
34	79.3263	79.8	4.57365
35	79.3263	79.8	-0.167066667
36	90.7595	79.8	1.7082
' Profil Sc6			
37	55.2863	95.76	-.4102
38	65.8604	95.76	5.0536
39	65.8039	95.76	-0.9749
40	84.2158	95.76	2.095033333
41	84.2158	95.76	-1.680466667
42	93.5864	95.76	-.0965
' Profil Sc7			
43	68.6792	111.72	-2.5955
44	74.4438	111.72	0.98354
45	74.4438	111.72	-3.108825
46	89.1211	111.72	-0.84774
47	89.1211	111.72	-3.365975
48	95.807	111.72	-2.319

'Stab	Knoten1	Knoten2	Kraft [kN]	Stirnfläche [m²]	Länge [m]
Masse [kg]					
1	1	2	2693.374	.0002426	1.2937
0.1760708					
2	2	3	626.6761	.0000565	1.496968
0.0474486					
3	3	4	626.6761	.0000565	3.070313
0.0973182					
4	4	5	8880.135	.0008	1.596668

## ScV13eTruss.txt

0.7165845					
5 ,	5 ,	6 ,	2693.374 ,	.0002426 ,	3.411463 ,
0.4642954					
6 ,	6 ,	4 ,	626.6761 ,	.0000565 ,	3.536884 ,
0.1121069					
7 ,	4 ,	2 ,	100.0015 ,	.000009 ,	2.882166 ,
0.0145521					
8 ,	1 ,	3 ,	626.6761 ,	.0000565 ,	1.330251 ,
0.0421643					
9 ,	3 ,	5 ,	2693.374 ,	.0002426 ,	2.896805 ,
0.3942511					
10 ,	7 ,	8 ,	-2238.915 ,	.0002017 ,	1.068728 ,
0.1209306					
11 ,	8 ,	9 ,	626.6761 ,	.0000565 ,	.9784071 ,
0.0310121					
12 ,	9 ,	10 ,	2693.374 ,	.0002426 ,	2.720441 ,
0.3702483					
13 ,	10 ,	11 ,	626.6761 ,	.0000565 ,	.9381893 ,
0.0297373					
14 ,	11 ,	12 ,	626.6761 ,	.0000565 ,	1.847302 ,
0.0585530					
15 ,	12 ,	10 ,	626.6761 ,	.0000565 ,	1.889375 ,
0.0598866					
16 ,	10 ,	8 ,	-2158.953 ,	.0001945 ,	2.630823 ,
0.2870609					
17 ,	7 ,	9 ,	2693.374 ,	.0002426 ,	1.181173 ,
0.1607559					
18 ,	9 ,	11 ,	-2158.953 ,	.0001945 ,	2.627396 ,
0.2866870					
19 ,	1 ,	7 ,	-2158.953 ,	.0001945 ,	1.317303 ,
0.1437368					
20 ,	6 ,	12 ,	-2238.915 ,	.0002017 ,	1.700873 ,
0.1924601					
21 ,	5 ,	11 ,	-14522.96 ,	.0013084 ,	1.286015 ,
0.9439506					
22 ,	4 ,	10 ,	-11774.29 ,	.0010607 ,	1.205202 ,
0.7171590					
23 ,	3 ,	9 ,	-14522.96 ,	.0013084 ,	1.299768 ,
0.9540460					
24 ,	2 ,	8 ,	8880.135 ,	.0008 ,	1.318536 ,
0.5917589					
25 ,	2 ,	9 ,	1693.359 ,	.0001526 ,	1.81546 ,
0.1554190					
26 ,	4 ,	11 ,	-17611.46 ,	.0015866 ,	1.63207 ,
1.4526768					
27 ,	4 ,	8 ,	2693.374 ,	.0002426 ,	2.541495 ,
0.3458939					
28 ,	5 ,	9 ,	-5247.456 ,	.0004727 ,	2.631582 ,
0.6978553					
29 ,	6 ,	10 ,	2693.374 ,	.0002426 ,	3.351321 ,
0.4561101					
30 ,	6 ,	11 ,	-5247.456 ,	.0004727 ,	3.22993 ,
0.8565281					
31 ,	2 ,	7 ,	2693.374 ,	.0002426 ,	1.385462 ,
0.1885595					
32 ,	3 ,	7 ,	-5247.456 ,	.0004727 ,	1.4713 ,
0.3901664					
33 ,	13 ,	14 ,	1693.359 ,	.0001526 ,	1.059708 ,
0.0907201					
34 ,	14 ,	15 ,	-2158.953 ,	.0001945 ,	.8060679 ,
0.0879537					
35 ,	15 ,	16 ,	2693.374 ,	.0002426 ,	2.409984 ,
0.3279954					
36 ,	16 ,	17 ,	-5247.456 ,	.0004727 ,	.6038 ,
0.1601185					
37 ,	17 ,	18 ,	1693.359 ,	.0001526 ,	1.148196 ,
0.0982955					
38 ,	18 ,	16 ,	-2158.953 ,	.0001945 ,	1.178842 ,
0.1286287					
39 ,	16 ,	14 ,	-2158.953 ,	.0001945 ,	2.386522 ,

## ScV13eTruss.txt

0.2604041					
40 ,	13 ,	15 ,	4753.405 ,	.0004282 ,	1.014962 ,
0.2438143					
41 ,	15 ,	17 ,	1693.359 ,	.0001526 ,	2.366769 ,
0.2026158					
42 ,	7 ,	13 ,	-2158.953 ,	.0001945 ,	1.317425 ,
0.1437502					
43 ,	12 ,	18 ,	-2238.915 ,	.0002017 ,	1.214926 ,
0.1374734					
44 ,	11 ,	17 ,	-14522.96 ,	.0013084 ,	1.256805 ,
0.9225104					
45 ,	10 ,	16 ,	-9385.449 ,	.0008455 ,	1.194174 ,
0.5664271					
46 ,	9 ,	15 ,	4873.407 ,	.000439 ,	1.331233 ,
0.3278548					
47 ,	8 ,	14 ,	8880.135 ,	.0008 ,	1.300108 ,
0.5834886					
48 ,	8 ,	15 ,	1693.359 ,	.0001526 ,	1.447716 ,
0.1239369					
49 ,	10 ,	17 ,	-2238.915 ,	.0002017 ,	1.309712 ,
0.1481987					
50 ,	10 ,	14 ,	2693.374 ,	.0002426 ,	2.347008 ,
0.3194245					
51 ,	11 ,	15 ,	-2158.953 ,	.0001945 ,	2.372852 ,
0.2589125					
52 ,	12 ,	16 ,	-2158.953 ,	.0001945 ,	1.949285 ,
0.2126953					
53 ,	12 ,	17 ,	-2238.915 ,	.0002017 ,	1.849689 ,
0.2092992					
54 ,	8 ,	13 ,	4753.405 ,	.0004282 ,	1.231362 ,
0.2957981					
55 ,	9 ,	13 ,	1693.359 ,	.0001526 ,	1.366944 ,
0.1170222					
56 ,	19 ,	20 ,	-2158.953 ,	.0001945 ,	1.079262 ,
0.1177631					
57 ,	20 ,	21 ,	-2158.953 ,	.0001945 ,	.7014238 ,
0.0765355					
58 ,	21 ,	22 ,	2693.374 ,	.0002426 ,	2.112282 ,
0.2874786					
59 ,	22 ,	23 ,	-2158.953 ,	.0001945 ,	.4223214 ,
0.0460814					
60 ,	23 ,	24 ,	1693.359 ,	.0001526 ,	.9134699 ,
0.0782009					
61 ,	24 ,	22 ,	-2158.953 ,	.0001945 ,	.9270977 ,
0.1011598					
62 ,	22 ,	20 ,	-2238.915 ,	.0002017 ,	2.111596 ,
0.2389348					
63 ,	19 ,	21 ,	-2238.915 ,	.0002017 ,	.9303774 ,
0.1052756					
64 ,	21 ,	23 ,	-2238.915 ,	.0002017 ,	2.083775 ,
0.2357869					
65 ,	13 ,	19 ,	-2158.953 ,	.0001945 ,	1.318749 ,
0.1438946					
66 ,	18 ,	24 ,	-2158.953 ,	.0001945 ,	1.181882 ,
0.1289605					
67 ,	17 ,	23 ,	6460.098 ,	.000582 ,	1.241136 ,
0.4052334					
68 ,	16 ,	22 ,	2693.374 ,	.0002426 ,	1.202518 ,
0.1636611					
69 ,	15 ,	21 ,	6460.098 ,	.000582 ,	1.331304 ,
0.4346735					
70 ,	14 ,	20 ,	2693.374 ,	.0002426 ,	1.312543 ,
0.1786353					
71 ,	18 ,	22 ,	-2158.953 ,	.0001945 ,	1.479043 ,
0.1613850					
72 ,	18 ,	23 ,	-2158.953 ,	.0001945 ,	1.384948 ,
0.1511179					
73 ,	19 ,	14 ,	-2238.915 ,	.0002017 ,	1.237476 ,
0.1400250					
74 ,	19 ,	15 ,	1693.359 ,	.0001526 ,	1.252829 ,

## ScV13eTruss.txt

0.1072530					
75 ,	16 ,	20 ,	1693.359 ,	.0001526 ,	2.143202 ,
0.1834765					
76 ,	17 ,	21 ,	1440.022 ,	.0001297 ,	2.121727 ,
0.1543805					
77 ,	14 ,	21 ,	-2238.915 ,	.0002017 ,	1.39846 ,
0.1582409					
78 ,	16 ,	23 ,	2693.374 ,	.0002426 ,	1.217144 ,
0.1656517					
79 ,	25 ,	26 ,	1693.359 ,	.0001526 ,	.9987172 ,
0.0854988					
80 ,	26 ,	27 ,	1693.359 ,	.0001526 ,	.6144465 ,
0.0526019					
81 ,	27 ,	28 ,	-2238.915 ,	.0002017 ,	1.858102 ,
0.2102511					
82 ,	28 ,	29 ,	1693.359 ,	.0001526 ,	.3727881 ,
0.0319139					
83 ,	29 ,	30 ,	1693.359 ,	.0001526 ,	.8535997 ,
0.0730755					
84 ,	30 ,	28 ,	-2238.915 ,	.0002017 ,	.8670483 ,
0.0981097					
85 ,	28 ,	26 ,	-2238.915 ,	.0002017 ,	1.858953 ,
0.2103474					
86 ,	25 ,	27 ,	-2238.915 ,	.0002017 ,	.868551 ,
0.0982798					
87 ,	27 ,	29 ,	-2238.915 ,	.0002017 ,	1.834223 ,
0.2075491					
88 ,	19 ,	25 ,	1693.359 ,	.0001526 ,	1.31722 ,
0.1127654					
89 ,	24 ,	30 ,	1693.359 ,	.0001526 ,	1.178374 ,
0.1008789					
90 ,	23 ,	29 ,	4866.741 ,	.0004384 ,	1.194925 ,
0.2938826					
91 ,	22 ,	28 ,	-7006.604 ,	.0006312 ,	1.192827 ,
0.4223837					
92 ,	21 ,	27 ,	4866.741 ,	.0004384 ,	1.290261 ,
0.3173300					
93 ,	20 ,	26 ,	-7006.604 ,	.0006312 ,	1.288208 ,
0.4561584					
94 ,	24 ,	28 ,	1693.359 ,	.0001526 ,	1.291476 ,
0.1105615					
95 ,	24 ,	29 ,	-2238.915 ,	.0002017 ,	1.268096 ,
0.1434897					
96 ,	25 ,	20 ,	-2238.915 ,	.0002017 ,	1.279279 ,
0.1447551					
97 ,	25 ,	21 ,	1693.359 ,	.0001526 ,	1.183977 ,
0.1013586					
98 ,	22 ,	26 ,	1693.359 ,	.0001526 ,	1.900288 ,
0.1626810					
99 ,	23 ,	27 ,	-2238.915 ,	.0002017 ,	1.875913 ,
0.2122665					
100 ,	20 ,	27 ,	-9385.449 ,	.0008455 ,	1.432848 ,
0.6796364					
101 ,	22 ,	29 ,	-7006.604 ,	.0006312 ,	1.242002 ,
0.4397968					
102 ,	31 ,	32 ,	1693.359 ,	.0001526 ,	.9457592 ,
0.0809651					
103 ,	32 ,	33 ,	1693.359 ,	.0001526 ,	.5285238 ,
0.0452462					
104 ,	33 ,	34 ,	1693.359 ,	.0001526 ,	1.57702 ,
0.1350065					
105 ,	34 ,	35 ,	1693.359 ,	.0001526 ,	.3386226 ,
0.0289890					
106 ,	35 ,	36 ,	-2238.915 ,	.0002017 ,	.827569 ,
0.0936425					
107 ,	36 ,	34 ,	-2238.915 ,	.0002017 ,	.8419147 ,
0.0952658					
108 ,	34 ,	32 ,	-2238.915 ,	.0002017 ,	1.572795 ,
0.1779675					
109 ,	31 ,	33 ,	-2238.915 ,	.0002017 ,	.8250991 ,

## ScV13eTruss.txt

0.0933630					
110 ,	33 ,	35 ,	-2238.915 ,	.0002017 ,	1.553757 ,
0.1758133					
111 ,	25 ,	31 ,	1693.359 ,	.0001526 ,	1.326715 ,
0.1135783					
112 ,	30 ,	36 ,	1693.359 ,	.0001526 ,	1.190524 ,
0.1019191					
113 ,	29 ,	35 ,	1693.359 ,	.0001526 ,	1.194549 ,
0.1022637					
114 ,	28 ,	34 ,	-2238.915 ,	.0002017 ,	1.198237 ,
0.1355850					
115 ,	27 ,	33 ,	3280.05 ,	.0002955 ,	1.302718 ,
0.2159587					
116 ,	26 ,	32 ,	-7006.604 ,	.0006312 ,	1.313321 ,
0.4650511					
117 ,	30 ,	34 ,	1693.359 ,	.0001526 ,	1.247081 ,
0.1067609					
118 ,	30 ,	35 ,	-2238.915 ,	.0002017 ,	1.273446 ,
0.1440951					
119 ,	31 ,	26 ,	-2238.915 ,	.0002017 ,	1.338267 ,
0.1514299					
120 ,	31 ,	27 ,	1693.359 ,	.0001526 ,	1.159395 ,
0.0992542					
121 ,	28 ,	32 ,	1693.359 ,	.0001526 ,	1.668488 ,
0.1428369					
122 ,	29 ,	33 ,	-2238.915 ,	.0002017 ,	1.665914 ,
0.1885043					
123 ,	26 ,	33 ,	-2238.915 ,	.0002017 ,	1.490026 ,
0.1686019					
124 ,	28 ,	35 ,	-2238.915 ,	.0002017 ,	1.284321 ,
0.1453256					
125 ,	37 ,	38 ,	1693.359 ,	.0001526 ,	.8501639 ,
0.0727813					
126 ,	38 ,	39 ,	1693.359 ,	.0001526 ,	.430626 ,
0.0368653					
127 ,	39 ,	40 ,	1693.359 ,	.0001526 ,	1.333291 ,
0.1141412					
128 ,	40 ,	41 ,	1693.359 ,	.0001526 ,	.2696786 ,
0.0230868					
129 ,	41 ,	42 ,	-2238.915 ,	.0002017 ,	.678824 ,
0.0768114					
130 ,	42 ,	40 ,	-2238.915 ,	.0002017 ,	.6873903 ,
0.0777808					
131 ,	40 ,	38 ,	-2238.915 ,	.0002017 ,	1.328022 ,
0.1502706					
132 ,	37 ,	39 ,	-2238.915 ,	.0002017 ,	.7523392 ,
0.0851300					
133 ,	39 ,	41 ,	-2238.915 ,	.0002017 ,	1.316101 ,
0.1489217					
134 ,	31 ,	37 ,	1693.359 ,	.0001526 ,	1.323898 ,
0.1133370					
135 ,	36 ,	42 ,	-2238.915 ,	.0002017 ,	1.164899 ,
0.1318126					
136 ,	35 ,	41 ,	1693.359 ,	.0001526 ,	1.197189 ,
0.1024897					
137 ,	34 ,	40 ,	-2238.915 ,	.0002017 ,	1.205371 ,
0.1363922					
138 ,	33 ,	39 ,	1693.359 ,	.0001526 ,	1.287642 ,
0.1102333					
139 ,	32 ,	38 ,	-2238.915 ,	.0002017 ,	1.302213 ,
0.1473502					
140 ,	36 ,	40 ,	1693.359 ,	.0001526 ,	1.232409 ,
0.1055048					
141 ,	36 ,	41 ,	-2238.915 ,	.0002017 ,	1.25565 ,
0.1420814					
142 ,	37 ,	32 ,	-2238.915 ,	.0002017 ,	1.302286 ,
0.1473584					
143 ,	37 ,	33 ,	-2238.915 ,	.0002017 ,	1.154539 ,
0.1306404					
144 ,	34 ,	38 ,	1693.359 ,	.0001526 ,	1.491955 ,

ScV13eTruss.txt

0.1277242					
145 ,	35 ,	39 ,	-2238.915 ,	.0002017 ,	1.495281 ,
0.1691965					
146 ,	32 ,	39 ,	-2238.915 ,	.0002017 ,	1.43654 ,
0.1625498					
147 ,	34 ,	41 ,	-2238.915 ,	.0002017 ,	1.273239 ,
0.1440717					
148 ,	43 ,	44 ,	-2238.915 ,	.0002017 ,	.4846636 ,
0.0548415					
149 ,	44 ,	45 ,	-2238.915 ,	.0002017 ,	.2923118 ,
0.0330762					
150 ,	45 ,	46 ,	1693.359 ,	.0001526 ,	1.060746 ,
0.0908090					
151 ,	46 ,	47 ,	1693.359 ,	.0001526 ,	.1798739 ,
0.0153988					
152 ,	47 ,	48 ,	-2238.915 ,	.0002017 ,	.483384 ,
0.0546967					
153 ,	48 ,	46 ,	-2238.915 ,	.0002017 ,	.4889902 ,
0.0553310					
154 ,	46 ,	44 ,	-2238.915 ,	.0002017 ,	1.056507 ,
0.1195477					
155 ,	43 ,	45 ,	-2238.915 ,	.0002017 ,	.4133866 ,
0.0467762					
156 ,	45 ,	47 ,	-2238.915 ,	.0002017 ,	1.048539 ,
0.1186461					
157 ,	37 ,	43 ,	1693.359 ,	.0001526 ,	1.496368 ,
0.1281019					
158 ,	42 ,	48 ,	-2238.915 ,	.0002017 ,	1.161878 ,
0.1314708					
159 ,	41 ,	47 ,	-2238.915 ,	.0002017 ,	1.198691 ,
0.1356363					
160 ,	40 ,	46 ,	-2238.915 ,	.0002017 ,	1.211011 ,
0.1370304					
161 ,	39 ,	45 ,	-2238.915 ,	.0002017 ,	1.305254 ,
0.1476944					
162 ,	38 ,	44 ,	-2238.915 ,	.0002017 ,	1.326653 ,
0.1501157					
163 ,	42 ,	46 ,	-2238.915 ,	.0002017 ,	1.184993 ,
0.1340863					
164 ,	42 ,	47 ,	-2238.915 ,	.0002017 ,	1.206593 ,
0.1365305					
165 ,	43 ,	38 ,	-2238.915 ,	.0002017 ,	1.280099 ,
0.1448479					
166 ,	43 ,	39 ,	-2238.915 ,	.0002017 ,	1.164122 ,
0.1317247					
167 ,	40 ,	44 ,	1693.359 ,	.0001526 ,	1.339069 ,
0.1146358					
168 ,	41 ,	45 ,	-2238.915 ,	.0002017 ,	1.340602 ,
0.1516940					
169 ,	38 ,	45 ,	1693.359 ,	.0001526 ,	1.419654 ,
0.1215345					
170 ,	40 ,	47 ,	1693.359 ,	.0001526 ,	1.254799 ,
0.1074216					
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Knoten  des  Profils
1-9      Sc0
10-32   Sc1
33-55   Sc2
56-78   Sc3
79-101  Sc4
102-124 Sc5
125-147 Sc6
148-170 Sc7
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Wooden Structure:  
 $A = 3 \text{ cm} * 5 \text{ cm} = 15e-4 \text{ m}^2$

Red Spruce

E=11.1 GPa  
 Specific Gravity 0.40 (weight/volume)  
 Density ~ 35 lbs/ft<sup>3</sup> (bei 30% Moisture) = 618 kg/m<sup>3</sup>  
 Belastung 4g  
 Dauerbelastungsfaktor 0.9 (-10%)  
 Druckbelastungsfaktor 0.667 (-30%)  
 Sicherheitsfaktor 1.5  
 max Zugkraft -1761.65N  
 -> Last 1t  
 mittlere Stablänge 1m  
 2\*170 Stäbe mit 2cm<sup>2</sup> Stirnfläche = 80 kg  
 Wing ohne Fahrwerk und Ausbau, mit Bespannung, geschätzt: 100 kg  
 Wing ohne Fahrwerk und Ausbau, ohne Bespannung, gerechnet: 2 x 34.57831 kg = 70 kg

Wing 110 kg	alle Knoten	
Pilot 110 kg	Knoten 3,5	
Engine+Fuel 110 kg	Knoten 15,21	
Fahrwerk	Knoten 3 Bugfahrwerk	
	Knoten 11 Hauptfahrwerk	
Schub	Knoten 13	
Auftriebsverteilung	Fz+145.3N	Knoten 26,20,14,8,2,28,22,16,10,4
	Fz+90.8N	Knoten 32,34
	Fz+62.9N	Knoten 38,40

Wichtung:		Knotenlast (90 Knoten)
Sc0	12	3.056 kg
Sc1	9	2.292
Sc2	6	1.528
Sc3	5	1.273
Sc4	4	1.019
Sc5	3	0.764
Sc6	2	0.509
Sc7	1	0.255 = Wichtung 1 /72*110 kg /6 Knoten
	42(72)	

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 Material

Stab	Laenge (m)	Flaeche (cm <sup>2</sup> )	Kante (cm)
26	1.632070	15.866	3.98
21	1.286015	13.084	3.62
23	1.299768	13.084	3.62
44	1.256805	13.084	3.62
22	1.205202	13.084	3.62
45	1.194174	8.455	2.91
100	1.432848	8.455	2.91
4	1.596668	8.455	2.91
24	1.318536	8.455	2.91
47	1.300108	8.455	2.91
91	1.192827	6.312	2.51
93	1.288208	6.312	2.51
101	1.242002	6.312	2.51
116	1.313321	6.312	2.51
67	1.241136	6.312	2.51
69	1.331304	6.312	2.51
28	2.631582	4.727	2.17
30	3.229930	4.727	2.17
32	1.471300	4.727	2.17
36	0.603800	4.727	2.17
46	1.331233	4.727	2.17
90	1.194925	4.727	2.17
92	1.290261	4.727	2.17
40	1.014962	4.727	2.17
54	1.231362	4.727	2.17
115	1.302718	4.727	2.17
1	1.293700	2.426	1.56
5	3.411463	2.426	1.56
9	2.896805	2.426	1.56
12	2.720441	2.426	1.56
17	1.181173	2.426	1.56

27	2.541495	2.426	1.56
29	3.351321	2.426	1.56
31	1.385462	2.426	1.56
35	2.409984	2.426	1.56
50	2.347008	2.426	1.56
58	2.112282	2.426	1.56
68	1.202518	2.426	1.56
70	1.312543	2.426	1.56
78	1.217144	2.426	1.56
10	1.068728	2.017	1.42
20	1.700873	2.017	1.42
43	1.214926	2.017	1.42
49	1.309712	2.017	1.42
53	1.849689	2.017	1.42
62	2.111596	2.017	1.42
63	0.9303774	2.017	1.42
64	2.083775	2.017	1.42
73	1.237476	2.017	1.42
77	1.398460	2.017	1.42
81	1.858102	2.017	1.42
84	0.8670483	2.017	1.42
85	1.858953	2.017	1.42
86	0.868551	2.017	1.42
87	1.834223	2.017	1.42
95	1.268096	2.017	1.42
96	1.279279	2.017	1.42
99	1.875913	2.017	1.42
106	0.827569	2.017	1.42
107	0.8419147	2.017	1.42
108	1.572795	2.017	1.42
109	0.8250991	2.017	1.42
110	1.553757	2.017	1.42
114	1.198237	2.017	1.42
118	1.273446	2.017	1.42
119	1.338267	2.017	1.42
122	1.665914	2.017	1.42
123	1.490026	2.017	1.42
124	1.284321	2.017	1.42
129	0.678824	2.017	1.42
130	0.6873903	2.017	1.42
131	1.328022	2.017	1.42
132	0.7523392	2.017	1.42
133	1.316101	2.017	1.42
135	1.164899	2.017	1.42
137	1.205371	2.017	1.42
139	1.302213	2.017	1.42
141	1.255650	2.017	1.42
142	1.302286	2.017	1.42
143	1.154539	2.017	1.42
145	1.495281	2.017	1.42
146	1.436540	2.017	1.42
147	1.273239	2.017	1.42
148	0.4846636	2.017	1.42
149	0.2923118	2.017	1.42
152	0.483384	2.017	1.42
153	0.4889902	2.017	1.42
154	1.056507	2.017	1.42
155	0.4133866	2.017	1.42
156	1.048539	2.017	1.42
158	1.161878	2.017	1.42
159	1.198691	2.017	1.42
160	1.211011	2.017	1.42
161	1.305254	2.017	1.42
162	1.326653	2.017	1.42
163	1.184993	2.017	1.42
164	1.206593	2.017	1.42
165	1.280099	2.017	1.42
166	1.164122	2.017	1.42
168	1.340602	2.017	1.42
16	2.630823	2.017	1.42



18	2.627396	2.017	1.42
19	1.317303	2.017	1.42
34	0.8060679	2.017	1.42
38	1.178842	2.017	1.42
39	2.386522	2.017	1.42
42	1.317425	2.017	1.42
51	2.372852	2.017	1.42
52	1.949285	2.017	1.42
56	1.079262	2.017	1.42
57	0.7014238	2.017	1.42
59	0.4223214	2.017	1.42
61	0.9270977	2.017	1.42
65	1.318749	2.017	1.42
66	1.181882	2.017	1.42
71	1.479043	2.017	1.42
72	1.384948	2.017	1.42
25	1.815460	1.526	1.24
33	1.059708	1.526	1.24
37	1.148196	1.526	1.24
41	2.366769	1.526	1.24
48	1.447716	1.526	1.24
55	1.366944	1.526	1.24
60	0.9134699	1.526	1.24
74	1.252829	1.526	1.24
75	2.143202	1.526	1.24
79	0.9987172	1.526	1.24
80	0.6144465	1.526	1.24
82	0.3727881	1.526	1.24
83	0.8535997	1.526	1.24
88	1.317220	1.526	1.24
89	1.178374	1.526	1.24
94	1.291476	1.526	1.24
97	1.183977	1.526	1.24
98	1.900288	1.526	1.24
102	0.9457592	1.526	1.24
103	0.5285238	1.526	1.24
104	1.577020	1.526	1.24
105	0.3386226	1.526	1.24
111	1.326715	1.526	1.24
112	1.190524	1.526	1.24
113	1.194549	1.526	1.24
117	1.247081	1.526	1.24
120	1.159395	1.526	1.24
121	1.668488	1.526	1.24
125	0.8501639	1.526	1.24
126	0.430626	1.526	1.24
127	1.333291	1.526	1.24
128	0.2696786	1.526	1.24
134	1.323898	1.526	1.24
136	1.197189	1.526	1.24
138	1.287642	1.526	1.24
140	1.232409	1.526	1.24
144	1.491955	1.526	1.24
150	1.060746	1.526	1.24
151	0.1798739	1.526	1.24
157	1.496368	1.526	1.24
167	1.339069	1.526	1.24
169	1.419654	1.526	1.24
170	1.254799	1.526	1.24
76	2.121727	1.526	1.24
2	1.496968	0.565	0.75
3	3.070313	0.565	0.75
6	3.536884	0.565	0.75
8	1.330251	0.565	0.75
11	0.9784071	0.565	0.75
13	0.9381893	0.565	0.75
14	1.847302	0.565	0.75
15	1.889375	0.565	0.75
7	2.882166	0.565	0.75