

```
1 D:\ANACONDA\envs\slam\python.exe D:\Toolbox\apps\PyCharm-P\ch-0\212.5284.44\plugins\python\helpers\pydev\pydevconsole.py --mode=client --port=59526
2
3 import sys; print('Python %s on %s' % (sys.version,
4 sys.platform))
5 sys.path.extend(['D:\\Project\\SLAM\\HW1', 'D:/Project/SLAM/HW1'])
6 PyDev console: starting.
7
8 Python 3.8.11 (default, Aug 6 2021, 09:57:55) [MSC v.1916 64 bit (AMD64)] on win32
9 >>> runfile('D:/Project/SLAM/HW1/main.py', wdir='D:/Project/SLAM/HW1')
10 -----
11 Loss: 17.49269332880999 [17.49269332880999]
12 Loss: 15.320098204512988 [17.49269332880999, 15.320098204512988]
13 Loss: 9.744148030210637 [17.49269332880999, 15.320098204512988, 9.744148030210637]
14 Loss: 8.048161076862762 [15.320098204512988, 9.744148030210637, 8.048161076862762]
15 Loss: 7.658059379313896 [9.744148030210637, 8.048161076862762, 7.658059379313896]
16 Loss: 7.6580593793138885 [8.048161076862762, 7.6580593793138885]
17 Convergence: 7.6580593793138885
18 -----
19 Loss: 17.70552706114208 [17.70552706114208]
20 Loss: 15.498700819961256 [17.70552706114208, 15.498700819961256]
21 Loss: 9.689594533584538 [17.70552706114208, 15.498700819961256, 9.689594533584538]
22 Loss: 8.072600983741262 [15.498700819961256, 9.689594533584538, 8.072600983741262]
23 Loss: 7.5962956532055355 [9.689594533584538, 8.072600983741262, 7.5962956532055355]
24 Loss: 7.596295653205548 [8.072600983741262, 7.5962956532055355, 7.596295653205548]
25 Convergence: 7.5962956532055355
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26 -----
27 Loss: 17.44721830383136 [17.44721830383136]
28 Loss: 15.127595058552837 [17.44721830383136, 15.
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29 Loss: 9.44228071376416 [17.44721830383136, 15.
127595058552837, 9.44228071376416]
30 Loss: 8.099663278346224 [15.127595058552837, 9.
44228071376416, 8.099663278346224]
31 Loss: 7.623312582718693 [9.44228071376416, 8.
099663278346224, 7.623312582718693]
32 Loss: 7.55052193224192 [8.099663278346224, 7.
623312582718693, 7.55052193224192]
33 Loss: 7.550521932241968 [7.623312582718693, 7.
55052193224192, 7.550521932241968]
34 Convergence: 7.550521932241919
35 -----
36 Loss: 17.346404196528383 [17.346404196528383]
37 Loss: 15.216568690575663 [17.346404196528383, 15.
216568690575663]
38 Loss: 10.237080720284254 [17.346404196528383, 15.
216568690575663, 10.237080720284254]
39 Loss: 8.098313417859151 [15.216568690575663, 10.
237080720284254, 8.098313417859151]
40 Loss: 7.557093814920011 [10.237080720284254, 8.
098313417859151, 7.557093814920011]
41 Loss: 7.498510282777729 [8.098313417859151, 7.
557093814920011, 7.498510282777729]
42 Loss: 7.498510282777788 [7.557093814920011, 7.
498510282777729, 7.498510282777788]
43 Convergence: 7.498510282777729
44 -----
45 Loss: 17.293577086972896 [17.293577086972896]
46 Loss: 15.362278259434452 [17.293577086972896, 15.
362278259434452]
47 Loss: 10.917483559211428 [17.293577086972896, 15.
362278259434452, 10.917483559211428]
48 Loss: 8.060434074670823 [15.362278259434452, 10.
917483559211428, 8.060434074670823]
49 Loss: 7.703645965771557 [10.917483559211428, 8.
060434074670823, 7.703645965771557]
50 Loss: 7.784840311721256 [8.060434074670823, 7.
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50 703645965771557, 7.784840311721256]
51 Convergence: 7.703645965771557
52 -----
53 Loss: 17.12996649764973 [17.12996649764973]
54 Loss: 14.97901642903702 [17.12996649764973, 14.
97901642903702]
55 Loss: 11.1968441216558 [17.12996649764973, 14.
97901642903702, 11.1968441216558]
56 Loss: 8.19027828251229 [14.97901642903702, 11.
1968441216558, 8.19027828251229]
57 Loss: 7.6635698298696795 [11.1968441216558, 8.
19027828251229, 7.6635698298696795]
58 Loss: 7.745346907266459 [8.19027828251229, 7.
6635698298696795, 7.745346907266459]
59 Convergence: 7.6635698298696795
60 -----
61 Loss: 17.44283948223074 [17.44283948223074]
62 Loss: 15.28582270487675 [17.44283948223074, 15.
28582270487675]
63 Loss: 11.323009692799658 [17.44283948223074, 15.
28582270487675, 11.323009692799658]
64 Loss: 8.26495562371384 [15.28582270487675, 11.
323009692799658, 8.26495562371384]
65 Loss: 7.920863018465278 [11.323009692799658, 8.
26495562371384, 7.920863018465278]
66 Loss: 7.931209797176802 [8.26495562371384, 7.
920863018465278, 7.931209797176802]
67 Convergence: 7.920863018465278
68 -----
69 Loss: 17.09153668564662 [17.09153668564662]
70 Loss: 15.140110347010795 [17.09153668564662, 15.
140110347010795]
71 Loss: 12.044430006581674 [17.09153668564662, 15.
140110347010795, 12.044430006581674]
72 Loss: 8.469658350020818 [15.140110347010795, 12.
044430006581674, 8.469658350020818]
73 Loss: 8.038967417059132 [12.044430006581674, 8.
469658350020818, 8.038967417059132]
74 Loss: 8.121734785804506 [8.469658350020818, 8.
038967417059132, 8.121734785804506]
75 Convergence: 8.038967417059132
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76 -----
77 Loss: 17.18420634710618 [17.18420634710618]
78 Loss: 15.114992630051043 [17.18420634710618, 15.
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79 Loss: 12.133059859741596 [17.18420634710618, 15.
    114992630051043, 12.133059859741596]
80 Loss: 8.487686293764312 [15.114992630051043, 12.
    133059859741596, 8.487686293764312]
81 Loss: 7.969347387167094 [12.133059859741596, 8.
    487686293764312, 7.969347387167094]
82 Loss: 7.981642849555758 [8.487686293764312, 7.
    969347387167094, 7.981642849555758]
83 Convergence: 7.969347387167094
84 -----
85 Loss: 17.12657374656516 [17.12657374656516]
86 Loss: 15.017345795429602 [17.12657374656516, 15.
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87 Loss: 12.489117790046402 [17.12657374656516, 15.
    017345795429602, 12.489117790046402]
88 Loss: 8.627588023000655 [15.017345795429602, 12.
    489117790046402, 8.627588023000655]
89 Loss: 7.998430745483314 [12.489117790046402, 8.
    627588023000655, 7.998430745483314]
90 Loss: 8.206597482987942 [8.627588023000655, 7.
    998430745483314, 8.206597482987942]
91 Convergence: 7.998430745483314
92 -----
93 Loss: 17.16268558598525 [17.16268558598525]
94 Loss: 14.86595496511038 [17.16268558598525, 14.
    86595496511038]
95 Loss: 12.448939524568518 [17.16268558598525, 14.
    86595496511038, 12.448939524568518]
96 Loss: 8.790998277955664 [14.86595496511038, 12.
    448939524568518, 8.790998277955664]
97 Loss: 8.204656297239996 [12.448939524568518, 8.
    790998277955664, 8.204656297239996]
98 Loss: 8.337421496693077 [8.790998277955664, 8.
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99 Convergence: 8.204656297239996
100 -----
101 Loss: 17.17055122747939 [17.17055122747939]
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102 Loss: 15.159686743284702 [17.17055122747939, 15.  
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103 Loss: 12.903723594981411 [17.17055122747939, 15.  
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104 Loss: 9.264680313990265 [15.159686743284702, 12.  
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105 Loss: 8.238663394201211 [12.903723594981411, 9.  
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106 Loss: 8.377288086725207 [9.264680313990265, 8.  
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107 Loss: 8.351028499511468 [8.238663394201211, 8.  
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108 Loss: 7.741081427001189 [8.377288086725207, 8.  
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109 Loss: 6.6337916478719405 [8.351028499511468, 7.  
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110 Loss: 5.836012044920958 [7.741081427001189, 6.  
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111 Loss: 5.585070004132936 [6.6337916478719405, 5.  
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112 Loss: 5.4052268731452875 [5.836012044920958, 5.  
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113 Loss: 5.455372343518942 [5.585070004132936, 5.  
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114 Convergence: 5.4052268731452875  
115 -----  
116 Loss: 17.185970546307054 [17.185970546307054]  
117 Loss: 14.924755298608911 [17.185970546307054, 14.  
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118 Loss: 12.772725015653718 [17.185970546307054, 14.  
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119 Loss: 9.275426416468623 [14.924755298608911, 12.  
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120 Loss: 8.378610192865256 [12.772725015653718, 9.  
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121 Loss: 8.435624197088757 [9.275426416468623, 8.  
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122 Loss: 8.117867750105429 [8.378610192865256, 8.  
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123 Loss: 7.13260378686381 [8.435624197088757, 8.  
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124 Loss: 5.909146720253094 [8.117867750105429, 7.  
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125 Loss: 5.260669519773384 [7.13260378686381, 5.  
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126 Loss: 5.427270567229883 [5.909146720253094, 5.  
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127 Loss: 5.3741394500982835 [5.260669519773384, 5.  
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128 Loss: 5.37999843359806 [5.427270567229883, 5.  
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129 Convergence: 5.260669519773384  
130 -----  
131 Loss: 17.17949988487431 [17.17949988487431]  
132 Loss: 14.946966545219235 [17.17949988487431, 14.  
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133 Loss: 13.0068888730609 [17.17949988487431, 14.  
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134 Loss: 9.473011255316255 [14.946966545219235, 13.  
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135 Loss: 8.457222555849299 [13.0068888730609, 9.  
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136 Loss: 8.467550344367732 [9.473011255316255, 8.  
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137 Loss: 7.838949702500427 [8.457222555849299, 8.  
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138 Loss: 6.267862278892265 [8.467550344367732, 7.  
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139 Loss: 4.980692294642718 [7.838949702500427, 6.  
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140 Loss: 5.306572885137598 [6.267862278892265, 4.  
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141 Convergence: 4.980692294642718  
142 -----  
143 Loss: 17.20858768651556 [17.20858768651556]  
144 Loss: 14.424163596937866 [17.20858768651556, 14.  
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145 Loss: 12.812291208535537 [17.20858768651556, 14.  
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146 Loss: 9.506929454166059 [14.424163596937866, 12.  
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147 Loss: 8.618906205887239 [12.812291208535537, 9.
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147 506929454166059, 8.618906205887239]
148 Loss: 8.65025525380893 [9.506929454166059, 8.
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149 Loss: 7.1908642873617215 [8.618906205887239, 8.
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150 Loss: 5.092392699585946 [8.65025525380893, 7.
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151 Loss: 4.8474335657337875 [7.1908642873617215, 5.
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152 Loss: 5.056825849336172 [5.092392699585946, 4.
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153 Convergence: 4.8474335657337875
154 -----
155 Loss: 17.174720877842354 [17.174720877842354]
156 Loss: 14.707908042428441 [17.174720877842354, 14.
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157 Loss: 13.02908061539156 [17.174720877842354, 14.
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158 Loss: 9.671475057179991 [14.707908042428441, 13.
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159 Loss: 8.82936137717667 [13.02908061539156, 9.
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160 Loss: 8.714436816566476 [9.671475057179991, 8.
82936137717667, 8.714436816566476]
161 Loss: 8.479211056217842 [8.82936137717667, 8.
714436816566476, 8.479211056217842]
162 Loss: 6.037130362768385 [8.714436816566476, 8.
479211056217842, 6.037130362768385]
163 Loss: 4.706240186466092 [8.479211056217842, 6.
037130362768385, 4.706240186466092]
164 Loss: 4.959169176702652 [6.037130362768385, 4.
706240186466092, 4.959169176702652]
165 Convergence: 4.706240186466092
166 -----
167 Loss: 17.3383615250015 [17.3383615250015]
168 Loss: 14.757650347803118 [17.3383615250015, 14.
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169 Loss: 12.871109138862936 [17.3383615250015, 14.
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170 Loss: 9.640261153174185 [14.757650347803118, 12.
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171 Loss: 8.948035958253428 [12.871109138862936, 9.  
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172 Loss: 8.911223908864812 [9.640261153174185, 8.  
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173 Loss: 7.959278405167748 [8.948035958253428, 8.  
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174 Loss: 4.876588426414706 [8.911223908864812, 7.  
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175 Loss: 4.746686721275031 [7.959278405167748, 4.  
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176 Loss: 4.768268693606485 [4.876588426414706, 4.  
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177 Convergence: 4.746686721275031  
178 -----  
179 Loss: 17.2311747429696 [17.2311747429696]  
180 Loss: 14.515630504544898 [17.2311747429696, 14.  
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181 Loss: 12.851771051230855 [17.2311747429696, 14.  
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182 Loss: 9.567557128024475 [14.515630504544898, 12.  
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183 Loss: 9.070921993331623 [12.851771051230855, 9.  
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184 Loss: 8.979176234068834 [9.567557128024475, 9.  
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185 Loss: 8.441282709017326 [9.070921993331623, 8.  
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186 Loss: 5.1185420438894 [8.979176234068834, 8.  
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187 Loss: 4.874142433698307 [8.441282709017326, 5.  
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188 Loss: 4.950283126397885 [5.1185420438894, 4.  
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189 Loss: 4.950283126397854 [4.874142433698307, 4.  
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190 Convergence: 4.874142433698307  
191 -----  
192 Loss: 17.213992322516376 [17.213992322516376]  
193 Loss: 14.376685852003352 [17.213992322516376, 14.  
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194 Loss: 12.851894102884366 [17.213992322516376, 14.
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194 376685852003352, 12.851894102884366]
195 Loss: 9.633136249701362 [14.376685852003352, 12.
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196 Loss: 9.057987607832299 [12.851894102884366, 9.
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197 Loss: 9.06290113357403 [9.633136249701362, 9.
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198 Loss: 8.600796032323887 [9.057987607832299, 9.
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199 Loss: 5.757322923859324 [9.06290113357403, 8.
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200 Loss: 4.929596729973097 [8.600796032323887, 5.
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201 Loss: 5.001485961812571 [5.757322923859324, 4.
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202 Convergence: 4.929596729973097
203 -----
204 Loss: 17.15644425337735 [17.15644425337735]
205 Loss: 14.405427592936665 [17.15644425337735, 14.
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206 Loss: 12.83144585168958 [17.15644425337735, 14.
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207 Loss: 9.56745916392853 [14.405427592936665, 12.
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208 Loss: 9.090489367160462 [12.83144585168958, 9.
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209 Loss: 9.062761057084348 [9.56745916392853, 9.
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210 Loss: 8.630442583110309 [9.090489367160462, 9.
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211 Loss: 6.449066357901596 [9.062761057084348, 8.
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212 Loss: 5.064555719310358 [8.630442583110309, 6.
449066357901596, 5.064555719310358]
213 Loss: 5.018536340726698 [6.449066357901596, 5.
064555719310358, 5.018536340726698]
214 Loss: 5.2096741832037 [5.064555719310358, 5.
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215 Convergence: 5.018536340726698
216 -----
217 Loss: 17.138077674614486 [17.138077674614486]
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218 Loss: 14.24098194723623 [17.138077674614486, 14.  
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219 Loss: 12.796080271163522 [17.138077674614486, 14.  
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220 Loss: 9.633655135862334 [14.24098194723623, 12.  
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221 Loss: 9.044088402644999 [12.796080271163522, 9.  
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222 Loss: 8.995970245354163 [9.633655135862334, 9.  
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223 Loss: 7.870836674773574 [9.044088402644999, 8.  
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224 Loss: 6.144722891676471 [8.995970245354163, 7.  
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225 Loss: 5.480897128279803 [7.870836674773574, 6.  
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226 Loss: 5.452378344345159 [6.144722891676471, 5.  
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227 Loss: 5.4554236324062995 [5.480897128279803, 5.  
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228 Convergence: 5.452378344345159  
229 -----  
230 Loss: 17.039121132874932 [17.039121132874932]  
231 Loss: 14.315024151588306 [17.039121132874932, 14.  
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232 Loss: 12.794538888620107 [17.039121132874932, 14.  
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233 Loss: 9.748519009104616 [14.315024151588306, 12.  
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255 Convergence: 5.563881046232609  
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1774	Convergence:	4.956134405109895	
1775	-----		
1776	Loss:	17.151729472151025	[17.151729472151025]
1777	Loss:	14.175203139516222	[17.151729472151025, 14.175203139516222]
1778	Loss:	12.767317474772538	[17.151729472151025, 14.175203139516222, 12.767317474772538]
1779	Loss:	9.455536050326558	[14.175203139516222, 12.767317474772538, 9.455536050326558]
1780	Loss:	8.75545358428633	[12.767317474772538, 9.455536050326558, 8.75545358428633]
1781	Loss:	8.85372447368529	[9.455536050326558, 8.75545358428633, 8.85372447368529]
1782	Loss:	8.339307459433925	[8.75545358428633, 8.85372447368529, 8.339307459433925]
1783	Loss:	4.976329787674871	[8.85372447368529, 8.339307459433925, 4.976329787674871]
1784	Loss:	4.823451719435971	[8.339307459433925, 4.976329787674871, 4.823451719435971]
1785	Loss:	4.84369275017824	[4.976329787674871, 4.84369275017824]

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1786 Convergence: 4.823451719435971
1787 -----
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1789 Loss: 14.00222158886182 [17.12429948029029, 14.
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1790 Loss: 12.765310115968642 [17.12429948029029, 14.
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1791 Loss: 9.568015726317153 [14.00222158886182, 12.
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1792 Loss: 8.78110803149249 [12.765310115968642, 9.
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1793 Loss: 8.62638103971344 [9.568015726317153, 8.
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1794 Loss: 8.36379460674304 [8.78110803149249, 8.
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1795 Loss: 6.013066052926606 [8.62638103971344, 8.
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1796 Loss: 4.697805300792275 [8.36379460674304, 6.
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1797 Loss: 4.9663492287299995 [6.013066052926606, 4.
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1798 Convergence: 4.697805300792275
1799 -----
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1801 Loss: 14.673277192571927 [17.186315099561156, 14.
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1802 Loss: 12.898483035793245 [17.186315099561156, 14.
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1804 Loss: 8.538658174051879 [12.898483035793245, 9.
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1805 Loss: 8.34209842811125 [9.47751303538329, 8.
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1806 Loss: 7.1204379595272815 [8.538658174051879, 8.
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1808 Loss: 5.000943261619847 [7.1204379595272815, 4.
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1812	Loss:	14.807179803440334 [17.098370995558138, 14.807179803440334]
1813	Loss:	12.917185276990557 [17.098370995558138, 14.807179803440334, 12.917185276990557]
1814	Loss:	9.52968147408789 [14.807179803440334, 12.917185276990557, 9.52968147408789]
1815	Loss:	8.373812581185586 [12.917185276990557, 8.373812581185586]
1816	Loss:	8.373129694307377 [9.52968147408789, 8.373812581185586, 8.373129694307377]
1817	Loss:	7.6380866226731925 [8.373812581185586, 8.373129694307377, 7.6380866226731925]
1818	Loss:	6.140832308668909 [8.373129694307377, 7.6380866226731925, 6.140832308668909]
1819	Loss:	5.009390421597286 [7.6380866226731925, 6.140832308668909, 5.009390421597286]
1820	Loss:	5.285724823455782 [6.140832308668909, 5.009390421597286, 5.285724823455782]
1821	Convergence:	5.009390421597286
1822	-----	
1823	Loss:	17.116061943622555 [17.116061943622555]
1824	Loss:	15.000718957588518 [17.116061943622555, 15.000718957588518]
1825	Loss:	12.890492980575061 [17.116061943622555, 15.000718957588518, 12.890492980575061]
1826	Loss:	9.44865177027151 [15.000718957588518, 12.890492980575061, 9.44865177027151]
1827	Loss:	8.365442039348206 [12.890492980575061, 9.44865177027151, 8.365442039348206]
1828	Loss:	8.414303706921729 [9.44865177027151, 8.365442039348206, 8.414303706921729]
1829	Loss:	8.033756895830651 [8.365442039348206, 8.414303706921729, 8.033756895830651]
1830	Loss:	6.970350998751444 [8.414303706921729, 8.033756895830651, 6.970350998751444]
1831	Loss:	5.733208271851253 [8.033756895830651, 6.970350998751444, 5.733208271851253]
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1834 Convergence: 5.223832370773028
1835 -----
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1837 Loss: 15.083644200542647 [17.232385001029918, 15.
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1838 Loss: 12.89264323391904 [17.232385001029918, 15.
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1839 Loss: 9.268160779401619 [15.083644200542647, 12.
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1847 Convergence: 5.3245243756350495
1848 -----
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1854 Loss: 8.207166057809946 [8.98459349793054, 8.
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1863 Convergence: 5.624266659707143  
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1873 Loss: 7.754607827157643 [8.092501419721842, 8.  
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1883 -----  
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1888 Loss: 7.916956341689272 [12.074764164376733, 8.  
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1891 -----  
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1893 Loss: 15.172173278137175 [17.004549736393212, 15.  
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1894 Loss: 12.23290595856814 [17.004549736393212, 15.  
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1895 Loss: 8.431053031756647 [15.172173278137175, 12.  
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1898 Convergence: 7.871021492338419  
1899 -----  
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1901 Loss: 15.288694570707165 [17.3200244606394, 15.  
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1904	Loss:	7.7955410627668895	[11.739925654132747, 8.224104436734574, 7.7955410627668895]
1905	Loss:	7.808978598702391	[8.224104436734574, 7.7955410627668895, 7.808978598702391]
1906	Convergence:	7.7955410627668895	
1907	-----		
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1909	Loss:	15.069583388557255	[17.073712335728224, 15.069583388557255]
1910	Loss:	11.346480353582026	[17.073712335728224, 15.069583388557255, 11.346480353582026]
1911	Loss:	8.158014617741156	[15.069583388557255, 11.346480353582026, 8.158014617741156]
1912	Loss:	7.699279894229001	[11.346480353582026, 8.158014617741156, 7.699279894229001]
1913	Loss:	7.643805223730432	[8.158014617741156, 7.699279894229001, 7.643805223730432]
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1915	Convergence:	7.643805223730432	
1916	-----		
1917	Loss:	17.19213535020645	[17.19213535020645]
1918	Loss:	15.312636774259818	[17.19213535020645, 15.312636774259818]
1919	Loss:	11.083706748587069	[17.19213535020645, 15.312636774259818, 11.083706748587069]
1920	Loss:	8.025559061794258	[15.312636774259818, 11.083706748587069, 8.025559061794258]
1921	Loss:	7.614823499763496	[11.083706748587069, 8.025559061794258, 7.614823499763496]
1922	Loss:	7.626292438722485	[8.025559061794258, 7.614823499763496, 7.626292438722485]
1923	Convergence:	7.614823499763496	
1924	-----		
1925	Loss:	17.36711556522765	[17.36711556522765]
1926	Loss:	15.37720666511929	[17.36711556522765, 15.37720666511929]
1927	Loss:	9.945660206277866	[17.36711556522765, 15.37720666511929, 9.945660206277866]

1928	Loss:	7.96318005730965	[15.37720666511929, 9.
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1929	Loss:	7.598592707456843	[9.945660206277866, 7.
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1930	Loss:	7.53990406293985	[7.96318005730965, 7.
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1931	Loss:	7.539904062939858	[7.598592707456843, 7.
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1932	Convergence:	7.53990406293982	
1933	-----		
1934	Loss:	17.463238494792606	[17.463238494792606]
1935	Loss:	15.186814516613316	[17.463238494792606, 15.
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1936	Loss:	9.620573850328718	[17.463238494792606, 15.
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1937	Loss:	8.092922229094137	[15.186814516613316, 9.
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1938	Loss:	7.617958846242212	[9.620573850328718, 8.
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1939	Loss:	7.54534896466036	[8.092922229094137, 7.
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1940	Loss:	7.54534896466034	[7.617958846242212, 7.
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1941	Convergence:	7.545348964660301	
1942	-----		
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1944	Loss:	15.398084334143842	[17.696491597442837, 15.
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1945	Loss:	9.562933818795841	[17.696491597442837, 15.
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1946	Loss:	8.01502106337405	[15.398084334143842, 9.
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1947	Loss:	7.5384845386999215	[9.562933818795841, 8.
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1948	Loss:	7.538484538699945	[8.01502106337405, 7.
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1949	Convergence:	7.5384845386999215	
1950	-----		
1951	Loss:	17.54946193020116	[17.54946193020116]
1952	Loss:	15.27572304144536	[17.54946193020116, 15.
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1953	Loss:	9.76097110063284	[17.54946193020116, 15.
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1954	Loss:	8.22340569761515	[15.27572304144536, 9.
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1955	Loss:	7.659743808496605	[9.76097110063284, 8.
		22340569761515,	7.659743808496605]
1956	Loss:	7.65974380849661	[8.22340569761515, 7.
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1957	Convergence:	7.659743808496605	
1958	-----		
1959	Loss:	17.49269332880999	[17.49269332880999]
1960	Loss:	15.320098204512988	[17.49269332880999, 15.
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1961	Loss:	9.744148030210637	[17.49269332880999, 15.
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1962	Loss:	8.048161076862762	[15.320098204512988, 9.
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1963	Loss:	7.658059379313896	[9.744148030210637, 8.
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1964	Loss:	7.6580593793138885	[8.048161076862762, 7.
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1965	Convergence:	7.6580593793138885	
1966	-----		
1967	Loss:	17.70552706114208	[17.70552706114208]
1968	Loss:	15.498700819961256	[17.70552706114208, 15.
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1969	Loss:	9.689594533584538	[17.70552706114208, 15.
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1970	Loss:	8.072600983741262	[15.498700819961256, 9.
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1971	Loss:	7.5962956532055355	[9.689594533584538, 8.
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1972	Loss:	7.596295653205548	[8.072600983741262, 7.
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1973	Convergence:	7.5962956532055355	
1974	-----		
1975	Loss:	17.44721830383136	[17.44721830383136]
1976	Loss:	15.127595058552837	[17.44721830383136, 15.
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1977	Loss:	9.44228071376416	[17.44721830383136, 15.
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1978	Loss:	8.099663278346224	[15.127595058552837, 9. 44228071376416, 8.099663278346224]
1979	Loss:	7.623312582718693	[9.44228071376416, 8. 099663278346224, 7.623312582718693]
1980	Loss:	7.55052193224192	[8.099663278346224, 7. 623312582718693, 7.55052193224192]
1981	Loss:	7.550521932241968	[7.623312582718693, 7. 55052193224192, 7.550521932241968]
1982	Convergence:	7.550521932241919	
1983	-----		
1984	Loss:	17.346404196528383	[17.346404196528383]
1985	Loss:	15.216568690575663	[17.346404196528383, 15. 216568690575663]
1986	Loss:	10.237080720284254	[17.346404196528383, 15. 216568690575663, 10.237080720284254]
1987	Loss:	8.098313417859151	[15.216568690575663, 10. 237080720284254, 8.098313417859151]
1988	Loss:	7.557093814920011	[10.237080720284254, 8. 098313417859151, 7.557093814920011]
1989	Loss:	7.498510282777729	[8.098313417859151, 7. 557093814920011, 7.498510282777729]
1990	Loss:	7.498510282777788	[7.557093814920011, 7. 498510282777729, 7.498510282777788]
1991	Convergence:	7.498510282777729	
1992	-----		
1993	Loss:	17.293577086972896	[17.293577086972896]
1994	Loss:	15.362278259434452	[17.293577086972896, 15. 362278259434452]
1995	Loss:	10.917483559211428	[17.293577086972896, 15. 362278259434452, 10.917483559211428]
1996	Loss:	8.060434074670823	[15.362278259434452, 10. 917483559211428, 8.060434074670823]
1997	Loss:	7.703645965771557	[10.917483559211428, 8. 060434074670823, 7.703645965771557]
1998	Loss:	7.784840311721256	[8.060434074670823, 7. 703645965771557, 7.784840311721256]
1999	Convergence:	7.703645965771557	
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2001	Loss:	17.12996649764973	[17.12996649764973]
2002	Loss:	14.97901642903702	[17.12996649764973, 14. 97901642903702]

2003	Loss:	11.1968441216558	[17.12996649764973, 14.97901642903702, 11.1968441216558]
2004	Loss:	8.19027828251229	[14.97901642903702, 11.1968441216558, 8.19027828251229]
2005	Loss:	7.6635698298696795	[11.1968441216558, 8.19027828251229, 7.6635698298696795]
2006	Loss:	7.745346907266459	[8.19027828251229, 7.6635698298696795, 7.745346907266459]
2007	Convergence:	7.6635698298696795	
2008	-----		
2009	Loss:	17.44283948223074	[17.44283948223074]
2010	Loss:	15.28582270487675	[17.44283948223074, 15.28582270487675]
2011	Loss:	11.323009692799658	[17.44283948223074, 15.28582270487675, 11.323009692799658]
2012	Loss:	8.26495562371384	[15.28582270487675, 11.323009692799658, 8.26495562371384]
2013	Loss:	7.920863018465278	[11.323009692799658, 8.26495562371384, 7.920863018465278]
2014	Loss:	7.931209797176802	[8.26495562371384, 7.920863018465278, 7.931209797176802]
2015	Convergence:	7.920863018465278	
2016	-----		
2017	Loss:	17.09153668564662	[17.09153668564662]
2018	Loss:	15.140110347010795	[17.09153668564662, 15.140110347010795]
2019	Loss:	12.044430006581674	[17.09153668564662, 15.140110347010795, 12.044430006581674]
2020	Loss:	8.469658350020818	[15.140110347010795, 12.044430006581674, 8.469658350020818]
2021	Loss:	8.038967417059132	[12.044430006581674, 8.469658350020818, 8.038967417059132]
2022	Loss:	8.121734785804506	[8.469658350020818, 8.038967417059132, 8.121734785804506]
2023	Convergence:	8.038967417059132	
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2026	Loss:	15.114992630051043	[17.18420634710618, 15.114992630051043]
2027	Loss:	12.133059859741596	[17.18420634710618, 15.114992630051043, 12.133059859741596]

2028	Loss:	8.487686293764312	[15.114992630051043, 12.133059859741596, 8.487686293764312]
2029	Loss:	7.969347387167094	[12.133059859741596, 8.487686293764312, 7.969347387167094]
2030	Loss:	7.981642849555758	[8.487686293764312, 7.969347387167094, 7.981642849555758]
2031	Convergence:	7.969347387167094	
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2034	Loss:	15.017345795429602	[17.12657374656516, 15.017345795429602]
2035	Loss:	12.489117790046402	[17.12657374656516, 15.017345795429602, 12.489117790046402]
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2038	Loss:	8.206597482987942	[8.627588023000655, 7.998430745483314, 8.206597482987942]
2039	Convergence:	7.998430745483314	
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2042	Loss:	14.86595496511038	[17.16268558598525, 14.86595496511038]
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2044	Loss:	8.790998277955664	[14.86595496511038, 12.448939524568518, 8.790998277955664]
2045	Loss:	8.204656297239996	[12.448939524568518, 8.790998277955664, 8.204656297239996]
2046	Loss:	8.337421496693077	[8.790998277955664, 8.204656297239996, 8.337421496693077]
2047	Convergence:	8.204656297239996	
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