C:\Users\yaels\anaconda3\envs\Gymmy\python.exe "C:\Users\yaels\יעל פרוייקט גמר\zedcheck\TrainingNew.py"

pygame 2.5.2 (SDL 2.28.3, Python 3.11.9)

Hello from the pygame community. https://www.pygame.org/contribute.html

screen start

CAMERA INITIALIZATION

ROBOT INITIALIZATION

CAMERA START

MP INITIALIZATION

Training: start exercisesMP START

ROBOT START

CAMERA: Exercise hello\_waving start

CAMERA: Exercise hello\_waving done

TRAINING: Exercise up\_with\_band\_and\_lean start

CAMERA: Exercise up\_with\_band\_and\_lean start

ROBOT: Exercise up\_with\_band\_and\_lean start

139.73 148.06

113.28 122.22

first angle mean: 139.73

first angle stdev: 0.0

second angle mean: 113.28

second angle stdev: 0.0

164.51 151.0

136.07 105.11

first angle mean: 152.12

first angle stdev: 12.389999

second angle mean: 124.675

second angle stdev: 11.395004

101.13 149.24

110.57 117.11

first angle mean: 135.12334

first angle stdev: 26.079008

second angle mean: 119.973335

second angle stdev: 11.435709

141.33 146.94

105.44 120.5

first angle mean: 136.675

first angle stdev: 22.744429

second angle mean: 116.340004

second angle stdev: 11.733921

163.77 155.56

126.23 108.65

first angle mean: 142.09401

first angle stdev: 23.050154

second angle mean: 118.31801

second angle stdev: 11.215965

163.61 172.94

125.67 110.7

first angle mean: 145.68001

first angle stdev: 22.517881

second angle mean: 119.543335

second angle stdev: 10.598998

158.3 175.03

122.46 112.12

first angle mean: 147.48286

first angle stdev: 21.310099

second angle mean: 119.96001

second angle stdev: 9.8657

160.04 159.36

106.73 119.78

first angle mean: 149.05249

first angle stdev: 20.36177

second angle mean: 118.30625

second angle stdev: 10.213214

158.72 151.45

110.9 117.78

first angle mean: 150.12665

first angle stdev: 19.43619

second angle mean: 117.48333

second angle stdev: 9.906427

151.86 153.6

115.32 115.61

first angle mean: 150.29999

first angle stdev: 18.44612

second angle mean: 117.26699

second angle stdev: 9.4204445

156.57 154.97

108.31 121.88

first angle mean: 150.86998

first angle stdev: 17.679811

second angle mean: 116.45273

second angle stdev: 9.343847

161.16 160.07

109.86 121.91

first angle mean: 151.7275

first angle stdev: 17.164385

second angle mean: 115.90333

second angle stdev: 9.129733

164.85 162.47

105.82 125.48

first angle mean: 152.73691

first angle stdev: 16.857655

second angle mean: 115.127686

second angle stdev: 9.173862

158.38 175.94

108.22 123.23

first angle mean: 153.14

first angle stdev: 16.309324

second angle mean: 114.63428

second angle stdev: 9.017383

156.88 150.36

110.47 125.26

first angle mean: 153.38933

first angle stdev: 15.783898

second angle mean: 114.35666

second angle stdev: 8.773331

151.1 126.48

108.69 123.14

first angle mean: 153.24625

first angle stdev: 15.292739

second angle mean: 114.0025

second angle stdev: 8.6047735

149.58 121.13

105.25 117.19

first angle mean: 153.0306

first angle stdev: 14.861193

second angle mean: 113.48765

second angle stdev: 8.598133

151.41 149.92

104.04 128.39

first angle mean: 152.94055

first angle stdev: 14.447253

second angle mean: 112.96278

second angle stdev: 8.631575

148.77 162.37

103.51 140.01

first angle mean: 152.72105

first angle stdev: 14.092728

second angle mean: 112.46527

second angle stdev: 8.662458

145.99 164.11

101.89 142.5

first angle mean: 152.38449

first angle stdev: 13.814009

second angle mean: 111.9365

second angle stdev: 8.752056

158.36 167.98

100.95 142.49

first angle mean: 152.66905

first angle stdev: 13.5410185

second angle mean: 111.41333

second angle stdev: 8.85579

175.06 168.63

101.06 142.84

first angle mean: 153.68683

first angle stdev: 14.027745

second angle mean: 110.942726

second angle stdev: 8.916901

178.01 168.96

100.63 144.61

first angle mean: 154.74435

first angle stdev: 14.588565

second angle mean: 110.49434

second angle stdev: 8.970902

177.42 178.06

99.39 140.54

first angle mean: 155.68916

first angle stdev: 14.982996

second angle mean: 110.03167

second angle stdev: 9.058012

170.57 175.21

98.12 141.0

first angle mean: 156.28441

first angle stdev: 14.967091

second angle mean: 109.55521

second angle stdev: 9.176827

169.64 168.47

96.75 143.71

first angle mean: 156.79808

first angle stdev: 14.89948

second angle mean: 109.0627

second angle stdev: 9.329483

170.15 166.76

96.24 144.62

first angle mean: 157.29259

first angle stdev: 14.836802

second angle mean: 108.58778

second angle stdev: 9.469937

170.98 167.68

97.47 144.58

first angle mean: 157.78142

first angle stdev: 14.789211

second angle mean: 108.19072

second angle stdev: 9.525423

174.51 167.29

97.38 145.41

first angle mean: 158.35826

first angle stdev: 14.849099

second angle mean: 107.81793

second angle stdev: 9.565354

174.22 164.31

98.42 146.31

first angle mean: 158.887

first angle stdev: 14.874569

second angle mean: 107.50466

second angle stdev: 9.554687

172.04 164.25

99.95 144.54

first angle mean: 159.3113

first angle stdev: 14.816083

second angle mean: 107.26096

second angle stdev: 9.49362

173.53 162.96

100.36 142.87

first angle mean: 159.75563

first angle stdev: 14.791107

second angle mean: 107.04531

second angle stdev: 9.420935

167.53 159.94

101.23 139.9

first angle mean: 159.99121

first angle stdev: 14.626117

second angle mean: 106.86909

second angle stdev: 9.3305

157.94 153.73

102.2 137.02

first angle mean: 159.93088

first angle stdev: 14.413589

second angle mean: 106.73176

second angle stdev: 9.226052

144.65 153.16

104.73 136.01

first angle mean: 159.49428

first angle stdev: 14.432488

second angle mean: 106.67457

second angle stdev: 9.099408

155.15 152.66

107.6 126.77

first angle mean: 159.3736

first angle stdev: 14.248525

second angle mean: 106.70028

second angle stdev: 8.973427

164.38 150.5

110.76 126.87

first angle mean: 159.50891

first angle stdev: 14.078084

second angle mean: 106.81

second angle stdev: 8.875783

159.53 148.17

112.3 127.13

first angle mean: 159.50946

first angle stdev: 13.891612

second angle mean: 106.954475

second angle stdev: 8.8021965

156.67 143.71

110.9 125.74

first angle mean: 159.43665

first angle stdev: 13.719701

second angle mean: 107.05564

second angle stdev: 8.710967

153.77 149.47

110.8 122.35

first angle mean: 159.29501

first angle stdev: 13.575977

second angle mean: 107.14925

second angle stdev: 8.621234

152.95 152.76

112.44 122.17

first angle mean: 159.14026

first angle stdev: 13.445067

second angle mean: 107.27828

second angle stdev: 8.554468

153.34 152.89

113.69 119.74

first angle mean: 159.00215

first angle stdev: 13.313441

second angle mean: 107.43095

second angle stdev: 8.508353

149.35 151.54

113.67 117.37

first angle mean: 158.77768

first angle stdev: 13.237896

second angle mean: 107.576035

second angle stdev: 8.461249

143.55 145.74

114.45 116.51

first angle mean: 158.4316

first angle stdev: 13.28192

second angle mean: 107.73227

second angle stdev: 8.427047

137.78 145.82

114.97 114.84

first angle mean: 157.97267

first angle stdev: 13.481695

second angle mean: 107.89311

second angle stdev: 8.400907

141.9 134.77

116.15 112.43

first angle mean: 157.62326

first angle stdev: 13.538784

second angle mean: 108.07261

second angle stdev: 8.395884

144.06 128.93

117.07 111.14

first angle mean: 157.33469

first angle stdev: 13.536231

second angle mean: 108.26404

second angle stdev: 8.406951

144.6 123.82

119.14 109.02

first angle mean: 157.06938

first angle stdev: 13.517412

second angle mean: 108.49062

second angle stdev: 8.462704

149.63 132.42

122.62 107.46

first angle mean: 156.91756

first angle stdev: 13.420054

second angle mean: 108.77898

second angle stdev: 8.610859

158.54 141.96

125.22 105.37

first angle mean: 156.95

first angle stdev: 13.287118

second angle mean: 109.1078

second angle stdev: 8.829608

168.79 155.98

125.86 103.98

first angle mean: 157.18216

first angle stdev: 13.258229

second angle mean: 109.43627

second angle stdev: 9.045887

177.46 154.95

127.68 101.16

first angle mean: 157.57211

first angle stdev: 13.422209

second angle mean: 109.78712

second angle stdev: 9.3022585

174.69 144.95

133.47 98.6

first angle mean: 157.8951

first angle stdev: 13.497442

second angle mean: 110.23397

second angle stdev: 9.761264

170.51 117.6

139.19 95.77

first angle mean: 158.12871

first angle stdev: 13.479598

second angle mean: 110.770195

second angle stdev: 10.42867

173.69 105.52

140.56 93.46

first angle mean: 158.41165

first angle stdev: 13.517348

second angle mean: 111.31183

second angle stdev: 11.073461

179.73 91.0

138.77 92.07

first angle mean: 158.79233

first angle stdev: 13.690381

second angle mean: 111.80214

second angle stdev: 11.56092

178.16 111.66

136.04 94.06

first angle mean: 159.13211

first angle stdev: 13.80593

second angle mean: 112.22737

second angle stdev: 11.892678

177.9 100.01

135.41 92.55

first angle mean: 159.4557

first angle stdev: 13.902724

second angle mean: 112.62707

second angle stdev: 12.169782

178.27 129.42

134.85 94.94

first angle mean: 159.77458

first angle stdev: 13.996701

second angle mean: 113.00373

second angle stdev: 12.402499

178.76 152.11

134.62 93.7

first angle mean: 160.091

first angle stdev: 14.090772

second angle mean: 113.364006

second angle stdev: 12.606197

178.99 156.93

134.34 94.03

first angle mean: 160.40082

first angle stdev: 14.1793585

second angle mean: 113.70787

second angle stdev: 12.783027

179.14 160.41

134.58 93.37

first angle mean: 160.70306

first angle stdev: 14.261272

second angle mean: 114.04452

second angle stdev: 12.949263

179.15 154.6

133.87 94.37

first angle mean: 160.99588

first angle stdev: 14.334269

second angle mean: 114.359215

second angle stdev: 13.082874

179.12 149.13

132.88 95.44

first angle mean: 161.27907

first angle stdev: 14.398372

second angle mean: 114.6486

second angle stdev: 13.181925

179.1 147.46

133.2 95.96

first angle mean: 161.55322

first angle stdev: 14.454565

second angle mean: 114.934006

second angle stdev: 13.277918

179.06 156.31

134.6 96.86

first angle mean: 161.81848

first angle stdev: 14.503177

second angle mean: 115.23198

second angle stdev: 13.394137

178.86 155.76

136.03 97.13

first angle mean: 162.07283

first angle stdev: 14.542096

second angle mean: 115.5424

second angle stdev: 13.53089

178.83 151.93

136.02 96.55

first angle mean: 162.31926

first angle stdev: 14.575026

second angle mean: 115.84354

second angle stdev: 13.655349

175.7 152.07

138.58 95.72

first angle mean: 162.51318

first angle stdev: 14.557126

second angle mean: 116.17305

second angle stdev: 13.825684

178.77 151.72

136.7 95.53

first angle mean: 162.74542

first angle stdev: 14.580953

second angle mean: 116.46629

second angle stdev: 13.941025

179.5 142.3

131.92 97.07

first angle mean: 162.9814

first angle stdev: 14.611906

second angle mean: 116.68395

second angle stdev: 13.961771

173.77 145.7

126.38 99.82

first angle mean: 163.13126

first angle stdev: 14.564908

second angle mean: 116.8186

second angle stdev: 13.910834

164.72 155.61

128.88 101.43

first angle mean: 163.15302

first angle stdev: 14.465983

second angle mean: 116.983826

second angle stdev: 13.88618

161.79 157.76

128.87 102.81

first angle mean: 163.1346

first angle stdev: 14.36877

second angle mean: 117.144455

second angle stdev: 13.8601465

161.13 158.22

127.71 105.03

first angle mean: 163.10786

first angle stdev: 14.274508

second angle mean: 117.285324

second angle stdev: 13.820667

155.09 156.87

127.86 108.09

first angle mean: 163.00237

first angle stdev: 14.209688

second angle mean: 117.42447

second angle stdev: 13.782219

159.51 154.67

124.62 110.28

first angle mean: 162.957

first angle stdev: 14.122653

second angle mean: 117.51792

second angle stdev: 13.716645

168.0 155.05

119.72 111.98

first angle mean: 163.02165

first angle stdev: 14.043296

second angle mean: 117.54615

second angle stdev: 13.630685

163.81 154.69

114.15 115.49

first angle mean: 163.03163

first angle stdev: 13.954409

second angle mean: 117.50317

second angle stdev: 13.549461

159.49 151.09

114.16 117.18

first angle mean: 162.98738

first angle stdev: 13.872501

second angle mean: 117.46138

second angle stdev: 13.469632

158.08 148.23

115.49 117.19

first angle mean: 162.92679

first angle stdev: 13.797248

second angle mean: 117.43704

second angle stdev: 13.387999

160.08 149.77

115.41 118.21

first angle mean: 162.89207

first angle stdev: 13.716419

second angle mean: 117.41232

second angle stdev: 13.307974

162.94 150.66

114.59 118.45

first angle mean: 162.89265

first angle stdev: 13.63354

second angle mean: 117.37832

second angle stdev: 13.231145

159.28 152.87

112.2 119.25

first angle mean: 162.84966

first angle stdev: 13.557809

second angle mean: 117.31667

second angle stdev: 13.164139

149.67 153.96

108.31 121.52

first angle mean: 162.6946

first angle stdev: 13.552534

second angle mean: 117.21071

second angle stdev: 13.122458

138.51 157.02

106.45 124.4

first angle mean: 162.41338

first angle stdev: 13.720696

second angle mean: 117.08559

second angle stdev: 13.096846

135.17 157.74

105.89 127.95

first angle mean: 162.10023

first angle stdev: 13.947279

second angle mean: 116.956894

second angle stdev: 13.07593

147.31 156.19

105.41 134.4

first angle mean: 161.93214

first angle stdev: 13.956132

second angle mean: 116.82568

second angle stdev: 13.058901

162.81 163.76

101.46 137.6

first angle mean: 161.94202

first angle stdev: 13.877814

second angle mean: 116.65304

second angle stdev: 13.085939

165.34 164.89

90.47 142.16

first angle mean: 161.97977

first angle stdev: 13.805096

second angle mean: 116.36211

second angle stdev: 13.299314

counter:1

144.62 169.03

91.63 144.24

first angle mean: 161.789

first angle stdev: 13.847803

second angle mean: 116.090324

second angle stdev: 13.475013

140.89 171.61

94.41 144.54

first angle mean: 161.56183

first angle stdev: 13.941778

second angle mean: 115.854675

second angle stdev: 13.588814

130.63 179.82

96.7 140.92

first angle mean: 161.22923

first angle stdev: 14.22886

second angle mean: 115.64871

second angle stdev: 13.659175

121.23 177.95

94.1 143.35

first angle mean: 160.80371

first angle stdev: 14.735881

second angle mean: 115.419464

second angle stdev: 13.765012

122.18 168.04

87.97 151.12

first angle mean: 160.39714

first angle stdev: 15.178875

second angle mean: 115.13052

second angle stdev: 13.97601

127.76 167.09

87.18 150.87

first angle mean: 160.05719

first angle stdev: 15.458923

second angle mean: 114.83938

second angle stdev: 14.189689

139.98 166.7

88.29 150.08

first angle mean: 159.85022

first angle stdev: 15.512169

second angle mean: 114.565674

second angle stdev: 14.368832

136.71 166.31

87.78 150.9

first angle mean: 159.61409

first angle stdev: 15.607057

second angle mean: 114.29235

second angle stdev: 14.54658

134.59 167.74

90.31 151.07

first angle mean: 159.36131

first angle stdev: 15.728357

second angle mean: 114.0501

second angle stdev: 14.670259

130.31 167.88

92.2 148.83

first angle mean: 159.0708

first angle stdev: 15.914233

second angle mean: 113.831604

second angle stdev: 14.757739

133.42 167.77

94.15 146.67

first angle mean: 158.81683

first angle stdev: 16.03762

second angle mean: 113.63674

second angle stdev: 14.813232

142.05 171.65

95.27 144.37

first angle mean: 158.65245

first angle stdev: 16.044088

second angle mean: 113.456665

second angle stdev: 14.851107

141.01 173.94

97.28 139.08

first angle mean: 158.48116

first angle stdev: 16.059458

second angle mean: 113.299614

second angle stdev: 14.863714

135.67 170.65

99.52 139.29

first angle mean: 158.26181

first angle stdev: 16.136341

second angle mean: 113.16712

second angle stdev: 14.853076

139.26 163.29

98.62 143.56

first angle mean: 158.08084

first angle stdev: 16.165014

second angle mean: 113.02858

second angle stdev: 14.849546

141.39 160.96

100.29 141.61

first angle mean: 157.92339

first angle stdev: 16.16929

second angle mean: 112.90841

second angle stdev: 14.830548

151.07 161.32

100.17 139.34

first angle mean: 157.85934

first angle stdev: 16.10706

second angle mean: 112.78935

second angle stdev: 14.811885

152.18 148.57

102.06 136.74

first angle mean: 157.80675

first angle stdev: 16.04154

second angle mean: 112.69

second angle stdev: 14.778924

151.18 134.45

105.7 134.33

first angle mean: 157.74596

first angle stdev: 15.980281

second angle mean: 112.62588

second angle stdev: 14.726062

137.73 139.75

108.45 133.56

first angle mean: 157.564

first angle stdev: 16.020515

second angle mean: 112.58791

second angle stdev: 14.66433

132.74 130.65

110.52 130.76

first angle mean: 157.34035

first angle stdev: 16.11975

second angle mean: 112.56928

second angle stdev: 14.599433

145.9 129.56

113.26 127.78

first angle mean: 157.2382

first angle stdev: 16.083668

second angle mean: 112.57545

second angle stdev: 14.534256

157.85 140.47

115.85 125.83

first angle mean: 157.24362

first angle stdev: 16.012445

second angle mean: 112.60442

second angle stdev: 14.473052

163.11 151.86

116.47 123.35

first angle mean: 157.29507

first angle stdev: 15.951444

second angle mean: 112.63833

second angle stdev: 14.41394

156.86 159.07

116.19 120.07

first angle mean: 157.29129

first angle stdev: 15.8819895

second angle mean: 112.66922

second angle stdev: 14.354923

151.71 168.54

118.11 116.75

first angle mean: 157.24318

first angle stdev: 15.8218

second angle mean: 112.716125

second angle stdev: 14.301762

156.2 167.08

120.73 113.09

first angle mean: 157.23425

first angle stdev: 15.7543335

second angle mean: 112.78462

second angle stdev: 14.259606

159.44 163.2

122.45 110.62

first angle mean: 157.25294

first angle stdev: 15.688739

second angle mean: 112.86653

second angle stdev: 14.226671

165.41 163.64

123.89 108.82

first angle mean: 157.32149

first angle stdev: 15.640415

second angle mean: 112.95917

second angle stdev: 14.202461

165.18 158.57

125.11 105.4

first angle mean: 157.387

first angle stdev: 15.591485

second angle mean: 113.06042

second angle stdev: 14.18623

161.83 163.41

127.57 101.87

first angle mean: 157.42372

first angle stdev: 15.532133

second angle mean: 113.180336

second angle stdev: 14.188425

165.63 169.49

129.2 100.6

first angle mean: 157.49098

first angle stdev: 15.486032

second angle mean: 113.311646

second angle stdev: 14.203789

169.99 179.56

132.54 98.3

first angle mean: 157.5926

first angle stdev: 15.46374

second angle mean: 113.46797

second angle stdev: 14.250926

168.6 177.23

138.32 94.61

first angle mean: 157.68137

first angle stdev: 15.432694

second angle mean: 113.668396

second angle stdev: 14.36634

166.94 168.08

142.58 93.14

first angle mean: 157.75543

first angle stdev: 15.392953

second angle mean: 113.89969

second angle stdev: 14.538712

163.78 153.11

143.94 92.14

first angle mean: 157.80325

first angle stdev: 15.341065

second angle mean: 114.13811

second angle stdev: 14.724191

164.48 166.8

143.78 93.59

first angle mean: 157.85582

first angle stdev: 15.291939

second angle mean: 114.371506

second angle stdev: 14.898278

176.08 167.43

138.68 94.29

first angle mean: 157.9982

first angle stdev: 15.31636

second angle mean: 114.56141

second angle stdev: 14.993499

robot count: 1

179.45 169.7

135.7 95.24

first angle mean: 158.1645

first angle stdev: 15.372443

second angle mean: 114.72527

second angle stdev: 15.049895

177.19 169.97

134.78 94.78

first angle mean: 158.31085

first angle stdev: 15.403155

second angle mean: 114.87954

second angle stdev: 15.09394

172.58 169.11

135.05 94.13

first angle mean: 158.41978

first angle stdev: 15.394429

second angle mean: 115.033516

second angle stdev: 15.138358

170.83 164.43

135.18 93.8

first angle mean: 158.5138

first angle stdev: 15.373713

second angle mean: 115.18614

second angle stdev: 15.181742

172.84 162.04

133.87 95.38

first angle mean: 158.6215

first angle stdev: 15.3657255

second angle mean: 115.32662

second angle stdev: 15.210434

172.11 165.44

131.98 96.28

first angle mean: 158.72217

first angle stdev: 15.352236

second angle mean: 115.4509

second angle stdev: 15.221201

172.19 166.43

130.74 97.75

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second angle mean: 115.56415

second angle stdev: 15.221284

173.15 161.4

129.48 99.47

first angle mean: 158.92728

first angle stdev: 15.331253

second angle mean: 115.66647

second angle stdev: 15.21175

170.25 163.19

127.7 100.88

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first angle stdev: 15.305574

second angle mean: 115.7543

second angle stdev: 15.190707

167.53 165.21

127.01 102.34

first angle mean: 159.07167

first angle stdev: 15.267131

second angle mean: 115.83587

second angle stdev: 15.165647

163.9 169.51

127.39 103.76

first angle mean: 159.10641

first angle stdev: 15.2175865

second angle mean: 115.91899

second angle stdev: 15.142512

161.21 169.03

128.42 105.45

first angle mean: 159.12143

first angle stdev: 15.164175

second angle mean: 116.008286

second angle stdev: 15.125016

157.43 166.42

125.87 107.47

first angle mean: 159.10944

first angle stdev: 15.110972

second angle mean: 116.078224

second angle stdev: 15.09399

140.36 165.09

127.9 107.36

first angle mean: 158.9774

first angle stdev: 15.139077

second angle mean: 116.161476

second angle stdev: 15.0732

154.47 166.98

123.45 108.76

first angle mean: 158.94589

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second angle mean: 116.212456

second angle stdev: 15.032679

162.59 169.44

118.04 111.36

first angle mean: 158.97119

first angle stdev: 15.041281

second angle mean: 116.22513

second angle stdev: 14.981159

162.43 169.81

115.46 114.1

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first angle stdev: 14.992058

second angle mean: 116.21986

second angle stdev: 14.929544

162.24 161.73

112.42 117.84

first angle mean: 159.01726

first angle stdev: 14.943024

second angle mean: 116.193825

second angle stdev: 14.881629

160.9 157.12

110.75 121.03

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second angle stdev: 14.837673

156.2 158.05

109.91 122.62

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first angle stdev: 14.844326

second angle mean: 116.114586

second angle stdev: 14.796314

158.89 156.73

109.79 123.67

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second angle stdev: 14.755617

161.99 152.15

109.63 125.97

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second angle stdev: 14.71569

161.95 148.79

108.69 128.21

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second angle mean: 115.9806

second angle stdev: 14.678957

160.72 149.79

108.48 130.21

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first angle stdev: 14.652211

second angle mean: 115.931244

second angle stdev: 14.643151

160.51 150.84

107.41 131.94

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second angle mean: 115.87555

second angle stdev: 14.611363

161.31 150.95

106.33 133.15

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first angle stdev: 14.558333

second angle mean: 115.81357

second angle stdev: 14.584013

169.59 152.92

102.93 136.26

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first angle stdev: 14.535652

second angle mean: 115.730446

second angle stdev: 14.5734415

170.62 156.5

99.35 139.55

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first angle stdev: 14.517864

second angle mean: 115.625435

second angle stdev: 14.58536

counter:2

179.42 169.04

93.04 146.22

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second angle stdev: 14.64944

178.74 177.06

91.72 146.3

first angle mean: 159.47696

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second angle mean: 115.33119

second angle stdev: 14.724087

178.56 176.82

90.96 148.08

first angle mean: 159.59697

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second angle mean: 115.17792

second angle stdev: 14.803624

171.09 178.2

91.11 147.12

first angle mean: 159.66881

first angle stdev: 14.609853

second angle mean: 115.027504

second angle stdev: 14.87869

166.75 173.46

92.37 145.85

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first angle stdev: 14.575031

second angle mean: 114.886765

second angle stdev: 14.938848

171.99 168.21

95.57 143.68

first angle mean: 159.78857

first angle stdev: 14.561762

second angle mean: 114.76753

second angle stdev: 14.969325

173.77 163.43

100.6 143.85

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first angle stdev: 14.558021

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second angle stdev: 14.964283

161.45 158.37

100.93 140.05

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first angle stdev: 14.514087

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second angle stdev: 14.956947

167.73 158.55

101.99 136.14

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second angle mean: 114.52036

second angle stdev: 14.943623

165.95 165.2

103.0 133.48

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first angle stdev: 14.446665

second angle mean: 114.45096

second angle stdev: 14.925189

161.11 163.18

103.2 132.44

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first angle stdev: 14.403617

second angle mean: 114.3836

second angle stdev: 14.905731

159.95 159.55

103.75 132.26

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first angle stdev: 14.360684

second angle mean: 114.32029

second angle stdev: 14.883795

163.71 147.2

104.94 132.57

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first angle stdev: 14.321

second angle mean: 114.26479

second angle stdev: 14.857123

170.45 141.38

106.13 132.02

first angle mean: 160.05806

first angle stdev: 14.301175

second angle mean: 114.216934

second angle stdev: 14.826418

178.65 162.62

108.05 131.21

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second angle mean: 114.18088

second angle stdev: 14.790478

177.49 166.29

109.76 129.53

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second angle mean: 114.155174

second angle stdev: 14.75125

179.44 170.36

112.32 127.7

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first angle stdev: 14.380556

second angle mean: 114.14456

second angle stdev: 14.709212

178.95 159.27

115.0 126.23

first angle mean: 160.48508

first angle stdev: 14.407732

second angle mean: 114.14948

second angle stdev: 14.667026

167.1 145.45

117.58 124.63

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first angle stdev: 14.375157

second angle mean: 114.16908

second angle stdev: 14.627346

161.17 145.71

118.61 124.96

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second angle mean: 114.19431

second angle stdev: 14.58955

165.23 155.91

119.85 126.66

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first angle stdev: 14.29814

second angle mean: 114.22627

second angle stdev: 14.554453

167.77 159.02

120.84 126.26

first angle mean: 160.59364

first angle stdev: 14.268119

second angle mean: 114.26343

second angle stdev: 14.521928

169.58 168.96

122.64 123.82

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first angle stdev: 14.243966

second angle mean: 114.31022

second angle stdev: 14.49476

164.23 178.14

124.34 121.1

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first angle stdev: 14.206843

second angle mean: 114.36594

second angle stdev: 14.473653

164.54 177.62

126.33 118.61

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first angle stdev: 14.170458

second angle mean: 114.43204

second angle stdev: 14.460833

167.49 177.06

127.91 117.75

first angle mean: 160.72258

first angle stdev: 14.140424

second angle mean: 114.506096

second angle stdev: 14.455424

168.24 172.88

129.03 117.71

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second angle mean: 114.585464

second angle stdev: 14.455582

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128.92 117.96

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second angle mean: 114.663376

second angle stdev: 14.454718

165.28 165.38

126.93 118.9

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second angle mean: 114.729675

second angle stdev: 14.443628

154.5 166.96

124.2 119.66

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second angle stdev: 14.421387

157.48 164.22

122.75 120.07

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first angle stdev: 13.981271

second angle mean: 114.82322

second angle stdev: 14.394514

164.07 161.52

122.53 119.9

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first angle stdev: 13.946104

second angle mean: 114.864204

second angle stdev: 14.36712

166.77 159.49

124.01 119.24

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first angle stdev: 13.915932

second angle mean: 114.9126

second angle stdev: 14.344417

167.68 159.72

124.85 118.21

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second angle stdev: 14.324675

169.33 166.31

125.97 117.07

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second angle mean: 115.022514

second angle stdev: 14.309185

174.68 177.38

128.09 115.13

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second angle mean: 115.090576

second angle stdev: 14.302835

165.64 169.36

128.48 112.51

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second angle stdev: 14.298084

161.33 162.51

129.04 110.54

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159.9 156.91

130.21 107.52

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second angle stdev: 14.29916

157.09 155.97

132.42 105.46

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second angle stdev: 14.314646

158.69 159.61

133.66 104.56

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first angle stdev: 13.695566

second angle mean: 115.48833

second angle stdev: 14.337142

161.73 170.0

135.1 103.22

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first angle stdev: 13.661046

second angle mean: 115.58738

second angle stdev: 14.368306

166.96 179.29

133.2 100.61

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second angle mean: 115.67588

second angle stdev: 14.386167

168.08 177.66

132.2 97.81

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second angle mean: 115.7585

second angle stdev: 14.397408

170.45 177.8

136.07 94.66

first angle mean: 161.07558

first angle stdev: 13.590613

second angle mean: 115.85955

second angle stdev: 14.432477

172.64 178.44

137.18 92.32

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first angle stdev: 13.581206

second angle mean: 115.965096

second angle stdev: 14.474267

169.72 179.11

138.91 91.1

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first angle stdev: 13.5610485

second angle mean: 116.078125

second angle stdev: 14.527664

168.56 179.11

139.58 91.12

first angle mean: 161.21132

first angle stdev: 13.537599

second angle mean: 116.19333

second angle stdev: 14.584674

169.14 179.13

139.19 91.31

first angle mean: 161.25

first angle stdev: 13.515833

second angle mean: 116.305504

second angle stdev: 14.637017

165.44 179.19

138.97 91.91

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first angle stdev: 13.486133

second angle mean: 116.415535

second angle stdev: 14.686174

166.9 179.13

137.54 93.01

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first angle stdev: 13.459181

second angle mean: 116.517586

second angle stdev: 14.723693

165.92 176.58

135.99 94.75

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first angle stdev: 13.4305935

second angle mean: 116.611206

second angle stdev: 14.749885

157.0 176.56

138.8 96.64

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second angle mean: 116.71737

second angle stdev: 14.7940035

157.25 171.07

134.54 99.79

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second angle mean: 116.80224

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129.88 102.64

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160.23 161.95

130.2 103.94

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155.38 159.96

131.83 106.25

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133.52 155.26

132.96 108.67

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128.89 110.91

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163.49 150.1

123.84 114.02

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first angle stdev: 13.344201

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second angle stdev: 14.761089

164.71 151.32

118.88 117.31

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second angle stdev: 14.7275

166.71 149.35

116.11 119.74

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first angle stdev: 13.290563

second angle mean: 117.16083

second angle stdev: 14.693856

167.35 151.78

114.35 122.93

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first angle stdev: 13.266852

second angle mean: 117.147995

second angle stdev: 14.661495

164.79 151.43

113.71 125.7

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first angle stdev: 13.238943

second angle mean: 117.13237

second angle stdev: 14.629963

158.93 151.04

112.01 126.89

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first angle stdev: 13.209802

second angle mean: 117.109184

second angle stdev: 14.600876

robot count: 2163.04

143.32

110.45 128.6

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first angle stdev: 13.180626

second angle mean: 117.07919

second angle stdev: 14.574776

167.89 140.61

109.86 130.19

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first angle stdev: 13.158736

second angle mean: 117.04682

second angle stdev: 14.550057

174.57 137.36

108.09 132.74

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first angle stdev: 13.159618

second angle mean: 117.006836

second angle stdev: 14.529819

178.86 133.83

105.62 133.91

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first angle stdev: 13.18252

second angle mean: 116.95622

second angle stdev: 14.517266

178.25 133.1

103.46 135.32

first angle mean: 161.39818

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second angle mean: 116.8965

second angle stdev: 14.512784

177.73 126.49

101.56 137.15

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first angle stdev: 13.2164345

second angle mean: 116.82894

second angle stdev: 14.516357

177.97 114.71

98.94 138.05

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second angle mean: 116.75048

second angle stdev: 14.532646

178.52 109.1

96.73 139.34

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first angle stdev: 13.250865

second angle mean: 116.663055

second angle stdev: 14.560845

178.83 109.89

95.61 142.22

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first angle stdev: 13.270444

second angle mean: 116.571526

second angle stdev: 14.595037

179.45 120.48

95.35 144.87

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first angle stdev: 13.292916

second angle mean: 116.47966

second angle stdev: 14.629905

168.64 158.56

93.65 144.02

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first angle stdev: 13.271873

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second angle stdev: 14.674754

counter:3

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90.25 141.12

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second angle stdev: 14.742532

162.18 176.54

91.02 140.33

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second angle stdev: 14.802913

159.64 164.66

94.58 141.42

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first angle stdev: 13.19133

second angle mean: 116.06937

second angle stdev: 14.838033

167.93 145.52

97.14 142.42

first angle mean: 161.83665

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second angle mean: 115.98915

second angle stdev: 14.85753

179.71 122.07

98.72 139.78

first angle mean: 161.91206

first angle stdev: 13.192509

second angle mean: 115.91629

second angle stdev: 14.868349

177.52 114.6

100.85 136.34

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second angle stdev: 14.869051

177.72 121.67

103.04 134.63

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second angle stdev: 14.860945

178.44 127.8

105.84 131.9

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169.31 128.69

108.49 129.19

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158.83 131.54

110.19 126.55

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second angle stdev: 14.793973

153.36 143.54

110.89 123.99

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second angle mean: 115.68501

second angle stdev: 14.766718

157.81 156.3

113.52 120.48

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second angle stdev: 14.737076

163.42 163.15

114.15 119.02

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159.78 165.0

114.65 117.02

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second angle stdev: 14.677511

156.24 167.78

116.12 115.07

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second angle stdev: 14.647799

156.13 168.7

117.32 113.65

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second angle mean: 115.67427

second angle stdev: 14.618612

161.41 167.75

118.56 110.77

first angle mean: 162.02061

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second angle stdev: 14.590369

164.84 165.55

120.76 108.39

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second angle mean: 115.706154

second angle stdev: 14.564681

167.15 166.49

122.11 106.74

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second angle stdev: 14.541235

165.22 170.51

123.31 104.63

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second angle stdev: 14.520173

161.69 169.5

126.24 101.89

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second angle stdev: 14.506355

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131.48 100.26

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second angle stdev: 14.511019

160.92 174.41

135.1 99.68

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167.57 176.41

135.94 98.5

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second angle mean: 116.01844

second angle stdev: 14.557489

171.93 176.95

135.48 97.08

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second angle stdev: 14.579573

168.41 173.36

136.21 96.18

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164.95 165.64

137.04 95.71

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second angle stdev: 14.633989

166.71 166.13

137.95 95.84

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second angle stdev: 14.667436

162.14 167.76

142.4 96.16

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second angle stdev: 14.7276

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146.88 92.21

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161.77 105.75

142.35 91.47

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second angle stdev: 14.875628

160.65 105.28

143.87 92.09

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second angle stdev: 14.941283

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141.9 95.61

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first angle stdev: 12.666725

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second angle stdev: 14.992557

155.91 158.05

141.22 97.0

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137.5 96.83

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150.98 138.22

136.67 97.11

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135.5 97.85

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145.63 130.4

133.45 99.43

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143.09 133.88

129.63 102.42

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second angle stdev: 15.091244

153.78 140.05

124.81 104.72

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second angle mean: 117.29257

second angle stdev: 15.070397

159.55 156.02

120.66 108.06

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second angle mean: 117.30491

second angle stdev: 15.044146

159.55 160.38

117.88 110.78

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second angle mean: 117.307014

second angle stdev: 15.016708

164.54 157.62

115.87 112.17

first angle mean: 161.81534

first angle stdev: 12.599928

second angle mean: 117.30178

second angle stdev: 14.98963

160.95 159.62

114.18 114.39

first angle mean: 161.81221

first angle stdev: 12.5771885

second angle mean: 117.290474

second angle stdev: 14.963626

155.21 159.11

112.97 117.34

first angle mean: 161.78838

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second angle stdev: 14.938838

155.77 154.12

112.47 121.05

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first angle stdev: 12.543274

second angle mean: 117.25759

second angle stdev: 14.91472

159.4 155.52

111.46 123.47

first angle mean: 161.75824

first angle stdev: 12.521573

second angle mean: 117.23681

second angle stdev: 14.891998

161.96 157.28

109.61 126.13

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second angle mean: 117.20957

second angle stdev: 14.872343

160.55 152.35

109.5 129.54

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second angle mean: 117.18214

second angle stdev: 14.852953

162.05 149.53

108.17 133.42

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first angle stdev: 12.455016

second angle mean: 117.150185

second angle stdev: 14.836269

164.86 149.19

107.3 135.82

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first angle stdev: 12.434356

second angle mean: 117.115364

second angle stdev: 14.821564

163.83 155.95

105.46 138.74

first angle mean: 161.77393

first angle stdev: 12.413047

second angle mean: 117.074326

second angle stdev: 14.811545

172.0 151.27

103.52 140.1

first angle mean: 161.80981

first angle stdev: 12.405995

second angle mean: 117.02677

second angle stdev: 14.807245

179.84 150.98

100.87 142.6

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first angle stdev: 12.4299345

second angle mean: 116.97028

second angle stdev: 14.812069

177.5 156.03

98.35 142.12

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second angle mean: 116.9054

second angle stdev: 14.826894

counter:4

174.15 162.65

95.98 146.36

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second angle stdev: 14.852224

165.56 166.88

93.61 148.12

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second angle mean: 116.75238

second angle stdev: 14.889088

158.67 172.8

91.05 146.38

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second angle mean: 116.66375

second angle stdev: 14.939565

161.3 174.6

90.61 144.96

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second angle mean: 116.57422

second angle stdev: 14.991607

156.89 177.65

91.74 143.07

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first angle stdev: 12.362961

second angle mean: 116.489174

second angle stdev: 15.036073

156.43 177.81

92.35 142.98

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second angle mean: 116.406784

second angle stdev: 15.076265

161.63 176.41

92.39 142.9

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second angle mean: 116.325096

second angle stdev: 15.11542

165.2 179.22

91.77 142.01

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164.7 179.37

91.53 141.16

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first angle stdev: 12.28584

second angle mean: 116.15837

second angle stdev: 15.19929

163.5 178.62

92.62 140.32

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first angle stdev: 12.265468

second angle mean: 116.079124

second angle stdev: 15.234821

167.41 174.04

94.61 140.4

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second angle mean: 116.00708

second angle stdev: 15.259832

177.42 150.43

97.14 140.8

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first angle stdev: 12.260899

second angle mean: 115.94398

second angle stdev: 15.273186

178.39 126.32

98.8 139.06

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first angle stdev: 12.27673

second angle mean: 115.886826

second angle stdev: 15.279696

177.56 117.91

100.18 137.8

first angle mean: 162.13274

first angle stdev: 12.288642

second angle mean: 115.83464

second angle stdev: 15.281046

178.0 122.29

102.09 138.88

first angle mean: 162.18527

first angle stdev: 12.302097

second angle mean: 115.78914

second angle stdev: 15.276145

179.97 119.81

103.58 135.91

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second angle mean: 115.74884

second angle stdev: 15.266982

169.05 128.33

106.07 132.42

first angle mean: 162.26634

first angle stdev: 12.309947

second angle mean: 115.717

second angle stdev: 15.2519245

166.76 126.68

108.19 128.68

first angle mean: 162.28108

first angle stdev: 12.292436

second angle mean: 115.692314

second angle stdev: 15.232979

165.92 127.1

110.1 125.49

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first angle stdev: 12.274092

second angle mean: 115.67404

second angle stdev: 15.211417

163.54 139.22

111.33 122.71

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second angle mean: 115.65989

second angle stdev: 15.18864

163.1 147.72

112.92 120.4

first angle mean: 162.29964

first angle stdev: 12.234466

second angle mean: 115.651

second angle stdev: 15.164763

163.82 156.34

114.88 118.61

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163.12 161.43

115.84 117.66

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second angle stdev: 15.115833

156.83 159.11

117.25 116.98

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first angle stdev: 12.179654

second angle mean: 115.65427

second angle stdev: 15.091784

154.68 153.78

118.06 116.7

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first angle stdev: 12.167725

second angle mean: 115.66199

second angle stdev: 15.0681925

164.12 158.66

119.09 114.18

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first angle stdev: 12.148722

second angle mean: 115.672935

second angle stdev: 15.045345

166.11 162.7

119.6 112.1

first angle mean: 162.28334

first angle stdev: 12.1312895

second angle mean: 115.68543

second angle stdev: 15.022999

robot count: 3157.05

165.08

121.36 111.24

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first angle stdev: 12.115595

second angle mean: 115.703445

second angle stdev: 15.00253

153.32 164.06

122.49 108.7

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second angle stdev: 14.983623

158.23 155.2

124.29 106.09

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second angle mean: 115.751945

second angle stdev: 14.967679

145.91 144.03

130.27 102.37

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second angle mean: 115.797615

second angle stdev: 14.966216

146.17 132.61

133.87 99.4

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second angle mean: 115.854256

second angle stdev: 14.976853

152.28 118.17

137.18 95.99

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second angle mean: 115.92091

second angle stdev: 15.000731

158.58 109.83

140.63 94.23

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second angle mean: 115.99788

second angle stdev: 15.040512

159.73 144.36

144.72 94.65

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first angle stdev: 12.077525

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159.98 165.24

146.92 95.19

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second angle stdev: 15.175525

164.34 172.67

148.09 93.27

first angle mean: 162.0758

first angle stdev: 12.041412

second angle mean: 116.28102

second angle stdev: 15.255106

169.74 166.13

147.49 90.77

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first angle stdev: 12.030363

second angle mean: 116.377045

second angle stdev: 15.32938

179.13 152.82

143.45 88.71

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first angle stdev: 12.048762

second angle mean: 116.4601

second angle stdev: 15.378898

179.18 146.43

142.52 88.35

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first angle stdev: 12.067011

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second angle stdev: 15.422636

176.54 145.2

144.1 88.02

first angle mean: 162.2474

first angle stdev: 12.074498

second angle mean: 116.62381

second angle stdev: 15.473888

170.88 141.63

145.56 87.35

first angle mean: 162.27365

first angle stdev: 12.065496

second angle mean: 116.71177

second angle stdev: 15.532247

169.23 136.74

144.98 86.89

first angle mean: 162.29472

first angle stdev: 12.0532675

second angle mean: 116.79742

second angle stdev: 15.586332

172.2 136.58

143.15 87.09

first angle mean: 162.32466

first angle stdev: 12.047317

second angle mean: 116.877045

second angle stdev: 15.629828

168.62 128.35

143.14 87.4

first angle mean: 162.34361

first angle stdev: 12.034105

second angle mean: 116.95614

second angle stdev: 15.672493

164.51 142.63

142.57 91.14

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first angle stdev: 12.016607

second angle mean: 117.03306

second angle stdev: 15.711577

157.24 157.4

140.25 96.97

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157.21 164.97

136.13 99.51

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second angle stdev: 15.749972

163.3 166.08

130.28 100.47

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second angle mean: 117.19842

second angle stdev: 15.742749

164.55 163.94

128.24 101.06

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second angle stdev: 15.7308445

159.4 150.67

127.29 101.45

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first angle stdev: 11.935663

second angle mean: 117.26095

second angle stdev: 15.717054

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123.47 104.45

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first angle stdev: 11.919112

second angle mean: 117.27926

second angle stdev: 15.697468

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120.54 107.08

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second angle stdev: 15.675361

157.7 166.19

119.64 109.21

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first angle stdev: 11.887245

second angle mean: 117.29574

second angle stdev: 15.652876

164.04 165.9

116.57 112.58

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second angle mean: 117.29362

second angle stdev: 15.630024

157.5 161.9

114.04 115.83

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second angle mean: 117.28414

second angle stdev: 15.60821

150.82 157.41

111.48 119.49

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first angle stdev: 11.854565

second angle mean: 117.26726

second angle stdev: 15.588638

153.39 146.57

109.73 122.76

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first angle stdev: 11.846951

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second angle stdev: 15.571302

154.87 147.86

108.32 125.06

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second angle stdev: 15.556165

157.24 156.62

107.07 127.21

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first angle stdev: 11.82233

second angle mean: 117.19037

second angle stdev: 15.543259

156.47 154.12

106.86 129.25

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second angle mean: 117.1607

second angle stdev: 15.530757

133.7 146.61

106.81 131.82

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123.89 143.05

105.94 133.93

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second angle mean: 117.09906

second angle stdev: 15.507681

132.03 143.29

105.62 134.76

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second angle mean: 117.06635

second angle stdev: 15.497657

163.36 130.5

104.96 132.72

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second angle stdev: 15.489037

179.47 135.3

101.66 136.32

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second angle stdev: 15.488644

178.58 138.24

100.17 139.17

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first angle stdev: 12.152011

second angle mean: 116.940895

second angle stdev: 15.492489

178.12 134.48

96.16 140.94

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first angle stdev: 12.164932

second angle mean: 116.88236

second angle stdev: 15.509808

counter:5

175.13 157.8

88.71 144.73

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first angle stdev: 12.167566

second angle mean: 116.80323

second angle stdev: 15.559613

167.19 178.72

87.23 142.47

first angle mean: 162.09358

first angle stdev: 12.153515

second angle mean: 116.72039

second angle stdev: 15.616221

158.55 178.61

87.65 142.39

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first angle stdev: 12.13797

second angle mean: 116.63918

second angle stdev: 15.669689

150.76 172.78

87.99 143.64

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first angle stdev: 12.135736

second angle mean: 116.55939

second angle stdev: 15.720532

147.41 167.9

88.22 144.41

first angle mean: 162.01147

first angle stdev: 12.143347

second angle mean: 116.48067

second angle stdev: 15.769381

147.89 171.17

88.21 143.8

first angle mean: 161.97234

first angle stdev: 12.149209

second angle mean: 116.40235

second angle stdev: 15.817469

155.37 172.09

88.97 143.0

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first angle stdev: 12.137364

second angle mean: 116.32657

second angle stdev: 15.861092

163.47 167.72

90.03 142.15

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second angle mean: 116.254135

second angle stdev: 15.899086

168.54 149.63

91.71 143.02

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second angle mean: 116.18671

second angle stdev: 15.929121

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93.64 142.09

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second angle stdev: 15.950883

165.36 146.16

95.7 139.4

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second angle mean: 116.069115

second angle stdev: 15.964719

169.8 138.22

97.11 136.96

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first angle stdev: 12.068892

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second angle stdev: 15.9735565

179.5 134.06

99.74 132.69

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second angle stdev: 15.974329

177.73 122.45

102.86 129.27

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second angle mean: 115.93769

second angle stdev: 15.967229

177.78 120.14

105.48 126.43

first angle mean: 162.14816

first angle stdev: 12.108876

second angle mean: 115.90944

second angle stdev: 15.954877

178.94 120.1

107.86 124.53

first angle mean: 162.19342

first angle stdev: 12.123845

second angle mean: 115.88774

second angle stdev: 15.938826

176.98 126.76

109.93 123.05

first angle mean: 162.23318

first angle stdev: 12.1317215

second angle mean: 115.87173

second angle stdev: 15.920376

174.37 136.53

110.91 122.54

first angle mean: 162.2657

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second angle mean: 115.85842

second angle stdev: 15.901091

173.44 142.84

111.68 121.8

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second angle mean: 115.84725

second angle stdev: 15.881285

172.41 143.26

111.81 121.02

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second angle stdev: 15.861462

170.5 154.3

112.1 119.2

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second angle mean: 115.826546

second angle stdev: 15.841524

160.89 155.18

112.4 117.39

first angle mean: 162.34045

first angle stdev: 12.09958

second angle mean: 115.81745

second angle stdev: 15.821482

156.55 155.47

113.49 116.0

first angle mean: 162.32513

first angle stdev: 12.087225

second angle mean: 115.8113

second angle stdev: 15.800993

159.68 158.12

114.29 113.95

first angle mean: 162.31815

first angle stdev: 12.07203

second angle mean: 115.80728

second angle stdev: 15.780326

157.5 161.18

115.4 112.1

first angle mean: 162.30547

first angle stdev: 12.058662

second angle mean: 115.806206

second angle stdev: 15.7595625

161.53 165.05

117.69 109.2

first angle mean: 162.30344

first angle stdev: 12.042892

second angle mean: 115.811165

second angle stdev: 15.739163

164.52 162.46

119.74 107.06

first angle mean: 162.30923

first angle stdev: 12.027653

second angle mean: 115.821434

second angle stdev: 15.71983

164.42 155.48

122.4 103.44

first angle mean: 162.31474

first angle stdev: 12.0124235

second angle mean: 115.83863

second angle stdev: 15.702884

159.9 137.17

129.13 99.92

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first angle stdev: 11.997402

second angle mean: 115.87323

second angle stdev: 15.697046

157.31 123.72

136.56 95.76

first angle mean: 162.29549

first angle stdev: 11.984512

second angle mean: 115.926956

second angle stdev: 15.711967

158.59 115.9

141.59 93.67

first angle mean: 162.28589

first angle stdev: 11.970461

second angle mean: 115.99344

second angle stdev: 15.745734

161.1 109.32

144.11 92.26

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first angle stdev: 11.955136

second angle mean: 116.06609

second angle stdev: 15.790028

165.51 133.07

145.83 92.83

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second angle mean: 116.14281

second angle stdev: 15.841708

174.24 151.59

143.31 93.0

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first angle stdev: 11.940823

second angle mean: 116.21265

second angle stdev: 15.881027

177.25 161.09

141.62 91.97

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second angle mean: 116.277794

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177.72 174.34

141.65 88.6

first angle mean: 162.39941

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179.62 177.24

141.31 86.61

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second angle stdev: 15.973215

178.89 175.74

140.99 86.1

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first angle stdev: 11.9889765

second angle mean: 116.468925

second angle stdev: 16.000883

178.56 177.1

140.66 86.6

first angle mean: 162.526

first angle stdev: 12.001039

second angle mean: 116.53033

second angle stdev: 16.026852

178.47 178.66

140.1 86.99

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first angle stdev: 12.012587

second angle mean: 116.590004

second angle stdev: 16.050314

178.7 179.38

139.58 87.31

first angle mean: 162.6071

first angle stdev: 12.024704

second angle mean: 116.648056

second angle stdev: 16.071507

178.87 179.3

139.87 87.62

first angle mean: 162.64806

first angle stdev: 12.037184

second angle mean: 116.70655

second angle stdev: 16.093405

178.97 179.52

140.32 88.1

first angle mean: 162.68907

first angle stdev: 12.049789

second angle mean: 116.76588

second angle stdev: 16.116587

178.93 179.18

140.48 89.87

first angle mean: 162.72977

first angle stdev: 12.062045

second angle mean: 116.82532

second angle stdev: 16.13999

178.87 179.89

140.52 92.0

first angle mean: 162.77014

first angle stdev: 12.073892

second angle mean: 116.88455

second angle stdev: 16.16317

179.11 171.14

140.11 94.54

first angle mean: 162.81088

first angle stdev: 12.086334

second angle mean: 116.94247

second angle stdev: 16.184513

167.41 162.7

141.99 95.67

first angle mean: 162.82231

first angle stdev: 12.073465

second angle mean: 117.00478

second angle stdev: 16.212452

157.38 160.8

140.83 96.92

first angle mean: 162.80882

first angle stdev: 12.061517

second angle mean: 117.063896

second angle stdev: 16.235653

164.18 160.57

135.28 98.62

first angle mean: 162.81221

first angle stdev: 12.046772

second angle mean: 117.108986

second angle stdev: 16.240791

166.58 168.11

131.0 100.74

first angle mean: 162.8215

first angle stdev: 12.033343

second angle mean: 117.14329

second angle stdev: 16.23537

160.96 171.5

129.17 102.28

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first angle stdev: 12.018869

second angle mean: 117.172905

second angle stdev: 16.226318

158.97 164.52

125.45 103.81

first angle mean: 162.80746

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second angle mean: 117.19324

second angle stdev: 16.211554

155.47 161.54

123.31 106.02

first angle mean: 162.78949

first angle stdev: 11.996371

second angle mean: 117.20824

second angle stdev: 16.194498

151.56 158.18

120.71 107.81

first angle mean: 162.76204

first angle stdev: 11.994525

second angle mean: 117.216805

second angle stdev: 16.175613

151.91 154.74

119.14 110.07

first angle mean: 162.73558

first angle stdev: 11.991841

second angle mean: 117.22148

second angle stdev: 16.156153

158.84 156.41

117.77 112.65

first angle mean: 162.72609

first angle stdev: 11.978781

second angle mean: 117.22282

second angle stdev: 16.136509

168.97 158.7

115.85 115.21

first angle mean: 162.74124

first angle stdev: 11.96818

second angle mean: 117.21949

second angle stdev: robot count: 4

16.117056

168.09 158.92

114.21 118.5

first angle mean: 162.7542

first angle stdev: 11.956572

second angle mean: 117.212204

second angle stdev: 16.098211

161.78 159.34

112.98 120.37

first angle mean: 162.75185

first angle stdev: 11.942218

second angle mean: 117.20197

second angle stdev: 16.0801

159.11 156.37

111.79 122.6

first angle mean: 162.74307

first angle stdev: 11.929157

second angle mean: 117.18894

second angle stdev: 16.062906

162.37 153.65

110.94 124.33

first angle mean: 162.74216

first angle stdev: 11.9148245

second angle mean: 117.17392

second angle stdev: 16.046505

165.05 152.35

109.71 125.79

first angle mean: 162.7477

first angle stdev: 11.901066

second angle mean: 117.15603

second angle stdev: 16.03141

165.47 154.03

108.16 126.25

first angle mean: 162.75421

first angle stdev: 11.887566

second angle mean: 117.13449

second angle stdev: 16.018253

169.56 159.1

107.11 127.1

first angle mean: 162.77045

first angle stdev: 11.878015

second angle mean: 117.110565

second angle stdev: 16.006603

171.77 145.78

106.58 129.81

first angle mean: 162.79189

first angle stdev: 11.87197

second angle mean: 117.08551

second angle stdev: 15.995771

173.59 137.12

106.09 132.18

first angle mean: 162.81754

first angle stdev: 11.869508

second angle mean: 117.05938

second angle stdev: 15.985725

179.23 125.56

104.55 133.53

first angle mean: 162.85641

first angle stdev: 11.882262

second angle mean: 117.02974

second angle stdev: 15.978355

178.24 131.34

102.91 134.8

first angle mean: 162.89279

first angle stdev: 11.891699

second angle mean: 116.99636

second angle stdev: 15.974181

177.85 133.35

100.7 135.25

first angle mean: 162.92807

first angle stdev: 11.899806

second angle mean: 116.957924

second angle stdev: 15.974901

178.19 145.75

97.84 135.86

first angle mean: 162.96397

first angle stdev: 11.908777

second angle mean: 116.91294

second angle stdev: 15.98296

counter:6

178.12 125.58

95.81 139.96

first angle mean: 162.99956

first angle stdev: 11.917383

second angle mean: 116.86341

second angle stdev: 15.99682

173.74 124.38

95.36 142.18

first angle mean: 163.0247

first angle stdev: 11.914736

second angle mean: 116.81305

second angle stdev: 16.01185

177.9 156.53

93.66 142.85

first angle mean: 163.05946

first angle stdev: 11.922459

second angle mean: 116.75894

second angle stdev: 16.032152

176.75 168.15

91.83 143.09

first angle mean: 163.09138

first angle stdev: 11.926843

second angle mean: 116.700836

second angle stdev: 16.058517

172.54 171.22

91.58 144.56

first angle mean: 163.11334

first angle stdev: 11.921657

second angle mean: 116.642426

second angle stdev: 16.08541

172.34 172.94

91.68 144.81

first angle mean: 163.13475

first angle stdev: 11.91609

second angle mean: 116.5845

second angle stdev: 16.111565

170.52 176.94

90.88 143.87

first angle mean: 163.15186

first angle stdev: 11.90758

second angle mean: 116.525

second angle stdev: 16.140245

171.9 179.24

89.14 142.09

first angle mean: 163.17206

first angle stdev: 11.901233

second angle mean: 116.46176

second angle stdev: 16.1751

171.36 178.16

89.31 139.77

first angle mean: 163.19092

first angle stdev: 11.893995

second angle mean: 116.39919

second angle stdev: 16.208817

170.89 178.81

88.62 138.8

first angle mean: 163.20862

first angle stdev: 11.886037

second angle mean: 116.335335

second angle stdev: 16.244743

168.37 174.26

88.86 138.29

first angle mean: 163.22046

first angle stdev: 11.874965

second angle mean: 116.272316

second angle stdev: 16.279245

168.1 165.89

88.88 138.15

first angle mean: 163.23163

first angle stdev: 11.863662

second angle mean: 116.20963

second angle stdev: 16.313202

170.65 151.44

89.47 139.66

first angle mean: 163.24855

first angle stdev: 11.855398

second angle mean: 116.14858

second angle stdev: 16.34447

169.05 140.09

91.09 138.84

first angle mean: 163.26178

first angle stdev: 11.845117

second angle mean: 116.09151

second angle stdev: 16.369492

177.39 139.64

94.57 135.74

first angle mean: 163.2939

first angle stdev: 11.850761

second angle mean: 116.04259

second angle stdev: 16.382965

178.66 138.16

96.51 134.33

first angle mean: 163.32872

first angle stdev: 11.85986

second angle mean: 115.9983

second angle stdev: 16.390732

178.24 131.04

98.46 133.69

first angle mean: 163.36247

first angle stdev: 11.867601

second angle mean: 115.958626

second angle stdev: 16.39337

178.4 129.16

100.82 133.59

first angle mean: 163.39641

first angle stdev: 11.875661

second angle mean: 115.924446

second angle stdev: 16.39061

178.87 126.92

102.76 130.51

first angle mean: 163.43127

first angle stdev: 11.884937

second angle mean: 115.8948

second angle stdev: 16.384031

177.16 139.86

104.74 126.37

first angle mean: 163.46211

first angle stdev: 11.889361

second angle mean: 115.869736

second angle stdev: 16.374132

171.8 148.47

105.87 123.87

first angle mean: 163.48082

first angle stdev: 11.882572

second angle mean: 115.847305

second angle stdev: 16.362604

158.2 155.29

107.41 120.67

first angle mean: 163.469

first angle stdev: 11.871894

second angle mean: 115.82843

second angle stdev: 16.349152

155.0 155.86

109.6 118.42

first angle mean: 163.45009

first angle stdev: 11.865371

second angle mean: 115.81453

second angle stdev: 16.333538

161.11 149.21

112.77 119.2

first angle mean: 163.44487

first angle stdev: 11.852663

second angle mean: 115.80775

second angle stdev: 16.315971

164.44 142.68

115.27 119.29

first angle mean: 163.44708

first angle stdev: 11.839579

second angle mean: 115.80656

second angle stdev: 16.297852

167.47 144.95

117.12 117.53

first angle mean: 163.456

first angle stdev: 11.82796

second angle mean: 115.80947

second angle stdev: 16.27989

168.56 137.39

118.8 116.89

first angle mean: 163.4673

first angle stdev: 11.817301

second angle mean: 115.816086

second angle stdev: 16.262478

165.88 135.85

120.17 115.73

first angle mean: 163.47261

first angle stdev: 11.804794

second angle mean: 115.82569

second angle stdev: 16.245804

164.54 143.18

121.46 114.25

first angle mean: 163.47498

first angle stdev: 11.791892

second angle mean: 115.838104

second angle stdev: 16.230053

166.78 146.82

122.39 112.32

first angle mean: 163.48224

first angle stdev: 11.779943

second angle mean: 115.85251

second angle stdev: 16.215109

152.85 149.14

125.27 110.92

first angle mean: 163.45892

first angle stdev: 11.777526

second angle mean: 115.87316

second angle stdev: 16.20331

137.61 155.88

126.96 109.18

first angle mean: 163.40236

first angle stdev: 11.826473

second angle mean: 115.89742

second angle stdev: 16.193861

144.98 162.34

126.76 108.24

first angle mean: 163.36214

first angle stdev: 11.844808

second angle mean: 115.92114

second angle stdev: 16.184116

154.11 168.51

125.42 106.67

first angle mean: 163.34198

first angle stdev: 11.83976

second angle mean: 115.94183

second angle stdev: 16.172543

161.16 166.45

125.67 105.02

first angle mean: 163.33723

first angle stdev: 11.82732

second angle mean: 115.962975

second angle stdev: 16.161306

162.82 166.58

128.57 103.59

first angle mean: 163.33612

first angle stdev: 11.814509

second angle mean: 115.990326

second angle stdev: 16.154419

155.87 166.8

136.31 102.98

first angle mean: 163.31995

first angle stdev: 11.806815

second angle mean: 116.03431

second angle stdev: 16.164534

167.49 162.31

136.87 100.44

first angle mean: 163.32896

first angle stdev: 11.795648

second angle mean: 116.07931

second angle stdev: 16.176014

140.85 174.92

143.51 99.73

first angle mean: 163.2805

first angle stdev: 11.828952

second angle mean: 116.13842

second angle stdev: 16.208567

130.89 179.05

146.85 98.5

first angle mean: 163.21085

first angle stdev: 11.911111

second angle mean: 116.20447

second angle stdev: 16.253515

159.77 175.97

145.08 96.75

first angle mean: 163.20348

first angle stdev: 11.899389

second angle mean: 116.266426

second angle stdev: 16.290956

168.08 178.71

144.09 95.22

first angle mean: 163.21393

first angle stdev: 11.88878

second angle mean: 116.32602

second angle stdev: 16.32425

164.53 179.17

144.07 93.42

first angle mean: 163.21674

first angle stdev: 11.876226

second angle mean: 116.3853

second angle stdev: 16.357044

159.89 177.88

145.82 92.32

first angle mean: 163.20964

first angle stdev: 11.864552

second angle mean: 116.44806

second angle stdev: 16.395908

163.04 179.95

148.04 91.83

first angle mean: 163.20927

first angle stdev: 11.851925

second angle mean: 116.515274

second angle stdev: 16.443018

165.65 173.97

148.66 90.61

first angle mean: 163.21448

first angle stdev: 11.8398695

second angle mean: 116.58353

second angle stdev: 16.492058

165.52 168.07

148.19 89.97

first angle mean: 163.21935

first angle stdev: 11.827795

second angle mean: 116.65048

second angle stdev: 16.538551

165.44 163.14

147.26 89.62

first angle mean: 163.22403

first angle stdev: 11.815726

second angle mean: 116.7152

second angle stdev: 16.580774

166.93 159.46

146.35 89.27

first angle mean: 163.23186

first angle stdev: 11.8044815

second angle mean: 116.77772

second angle stdev: 16.618994

168.51 157.81

145.38 89.86

first angle mean: 163.24297

first angle stdev: 11.79453

second angle mean: 116.83793

second angle stdev: 16.653173

168.37 161.99

144.8 91.36

first angle mean: 163.25374

first angle stdev: 11.7844715

second angle mean: 116.896675

second angle stdev: 16.684864

169.12 168.72

143.57 93.75

first angle mean: 163.26602

first angle stdev: 11.775171

second angle mean: 116.95259

second angle stdev: 16.711956

166.62 169.53

142.33 95.83

first angle mean: 163.27304

first angle stdev: 11.7638445

second angle mean: 117.00569

second angle stdev: 16.734686

163.89 162.01

140.68 96.24

first angle mean: 163.27434

first angle stdev: 11.751594

second angle mean: 117.055115

second angle stdev: 16.752094

162.61 160.25

139.01 96.87

first angle mean: 163.27295

first angle stdev: 11.739385

second angle mean: 117.100845

second angle stdev: 16.76455

155.08 168.71

140.79 98.65

first angle mean: 163.2559

first angle stdev: 11.733111

second angle mean: 117.15009

second angle stdev: 16.781837

150.15 168.29

140.08 100.95

first angle mean: 163.22873

first angle stdev: 11.7360935

second angle mean: 117.19768

second angle stdev: 16.796856

158.45 156.57

135.51 102.63

first angle mean: 163.21884

first angle stdev: 11.72595

second angle mean: 117.23559

second angle stdev: 16.80009

166.79 152.48

132.1 105.18

first angle mean: 163.22621

first angle stdev: 11.714953

second angle mean: 117.266304

second angle stdev: 16.796295

167.23 152.74

128.51 107.66

first angle mean: 163.23447

first angle stdev: 11.704279

second angle mean: 117.28948

second angle stdev: 16.786718

162.57 152.97

126.72 109.34

first angle mean: 163.23311

first angle stdev: 11.692269

second angle mean: 117.30888

second angle stdev: 16.774885

156.07 153.91

123.74 112.75

first angle mean: 163.2184

first angle stdev: 11.68476

second angle mean: 117.32209

second angle stdev: 16.760181

157.54 152.8

122.64 114.73

first angle mean: 163.20676

first angle stdev: 11.675606

second angle mean: 117.33299

second angle stdev: 16.744728

161.41 153.76

120.6 117.08

first angle mean: 163.2031

first angle stdev: 11.663943

second angle mean: 117.339676

second angle stdev: 16.728249

166.2 155.05

118.32 118.98

first angle mean: 163.20921

first angle stdev: 11.652821

second angle mean: 117.34167

second angle stdev: 16.71123

166.55 152.86

115.7 121.15

first angle mean: 163.21602

first angle stdev: 11.641921

second angle mean: 117.338326

second angle stdev: 16.694366

162.25 150.98

113.54 123.03

first angle mean: 163.21405

first angle stdev: 11.630166

second angle mean: 117.330605

second angle stdev: 16.67827

165.76 150.69

111.65 125.38

first angle mean: 163.21921

first angle stdev: 11.61893

second angle mean: 117.319084

second angle stdev: 16.663305

161.99 151.35

110.29 126.36

first angle mean: 163.21672

first angle stdev: 11.607295

second angle mean: 117.30486

second angle stdev: 16.64943

159.91 154.33

108.14 127.57

first angle mean: 163.21004

first angle stdev: 11.596516

second angle mean: 117.28634

second angle stdev: 16.637693

162.84 148.94

108.08 129.4

first angle mean: 163.2093

first angle stdev: 11.584831

second angle mean: 117.267784

second angle stdev: 16.626041

160.65 141.54

106.66 131.24

first angle mean: 163.20415

first angle stdev: 11.573739

second angle mean: 117.24643

second angle stdev: 16.616108

163.88 137.53

104.92 133.44

first angle mean: 163.2055

first angle stdev: 11.562152

second angle mean: 117.22169

second angle stdev: 16.608585

173.4 139.37

103.71 136.2

first angle mean: 163.22594

first angle stdev: 11.559555

second angle mean: 117.19461

second angle stdev: 16.602936

178.79 141.13

100.34 139.53

first angle mean: 163.25706

first angle stdev: 11.568906

second angle mean: 117.1609

second angle stdev: 16.603409

177.8 143.59

97.66 141.7

first angle mean: 163.28609

first angle stdev: 11.575566

second angle mean: 117.12197

second angle stdev: 16.60965

counter:7

179.28 145.76

89.31 148.06

first angle mean: 163.31795

first angle stdev: 11.5859995

second angle mean: 117.06657

second angle stdev: 16.639372

170.39 149.09

87.91 150.14

first angle mean: 163.332

first angle stdev: 11.578762

second angle mean: 117.008606

second angle stdev: 16.673481

164.63 153.04

87.41 150.63

first angle mean: 163.3346

first angle stdev: 11.567414

second angle mean: 116.949875

second angle stdev: 16.708923

162.18 160.23

87.29 149.78

first angle mean: 163.3323

first angle stdev: 11.556069

second angle mean: 116.89114

second angle stdev: 16.744368

163.64 161.85

87.65 148.24

first angle mean: 163.3329

first angle stdev: 11.544653

second angle mean: 116.83336

second angle stdev: 16.778147

169.59 robot count: 5

160.93

87.83 147.0

first angle mean: 163.34525

first angle stdev: 11.536603

second angle mean: 116.776146

second angle stdev: 16.810915

170.68 160.95

88.73 145.84

first angle mean: 163.35968

first angle stdev: 11.529827

second angle mean: 116.72094

second angle stdev: 16.840307

169.15 160.57

89.56 144.82

first angle mean: 163.37105

first angle stdev: 11.521348

second angle mean: 116.66758

second angle stdev: 16.86669

168.24 154.58

92.29 144.07

first angle mean: 163.3806

first angle stdev: 11.512062

second angle mean: 116.619774

second angle stdev: 16.88462

166.19 149.39

95.17 142.26

first angle mean: 163.3861

first angle stdev: 11.501463

second angle mean: 116.577805

second angle stdev: 16.894707

168.92 146.39

97.27 139.12

first angle mean: 163.39691

first angle stdev: 11.492824

second angle mean: 116.5401

second angle stdev: 16.899712

178.33 145.31

97.85 135.25

first angle mean: 163.42601

first angle stdev: 11.500494

second angle mean: 116.50367

second angle stdev: 16.903349

179.6 141.28

98.69 134.57

first angle mean: 163.45749

first angle stdev: 11.511385

second angle mean: 116.46901

second angle stdev: 16.905132

179.79 134.09

101.61 132.96

first angle mean: 163.4892

first angle stdev: 11.522657

second angle mean: 116.440155

second angle stdev: 16.901373

178.0 129.69

104.2 130.07

first angle mean: 163.51732

first angle stdev: 11.529163

second angle mean: 116.41644

second angle stdev: 16.893566

177.62 141.99

106.62 127.64

first angle mean: 163.5446

first angle stdev: 11.534663

second angle mean: 116.397484

second angle stdev: 16.88271

170.15 147.91

108.91 127.11

first angle mean: 163.55736

first angle stdev: 11.527171

second angle mean: 116.38303

second angle stdev: 16.869606

169.39 152.61

110.33 126.4

first angle mean: 163.5686

first angle stdev: 11.518901

second angle mean: 116.371376

second angle stdev: 16.855438

168.48 150.9

111.66 125.64

first angle mean: 163.57803

first angle stdev: 11.50983

second angle mean: 116.362305

second angle stdev: 16.840488

167.65 148.53

112.76 124.95

first angle mean: 163.58586

first angle stdev: 11.50016

second angle mean: 116.35539

second angle stdev: 16.825056

166.91 145.93

113.15 123.58

first angle mean: 163.59222

first angle stdev: 11.49006

second angle mean: 116.34926

second angle stdev: 16.809517

165.47 142.45

114.07 121.8

first angle mean: 163.59581

first angle stdev: 11.4793625

second angle mean: 116.3449

second angle stdev: 16.793734

162.44 147.4

115.03 120.02

first angle mean: 163.5936

first angle stdev: 11.468515

second angle mean: 116.34239

second angle stdev: 16.777802

164.76 151.25

116.3 118.09

first angle mean: 163.59584

first angle stdev: 11.457701

second angle mean: 116.34231

second angle stdev: 16.761814

166.3 159.62

117.36 116.1

first angle mean: 163.60097

first angle stdev: 11.44741

second angle mean: 116.34424

second angle stdev: 16.745932

165.03 159.89

117.99 114.37

first angle mean: 163.60368

first angle stdev: 11.436712

second angle mean: 116.34737

second angle stdev: 16.73019

158.49 162.14

119.11 112.11

first angle mean: 163.594

first angle stdev: 11.4280405

second angle mean: 116.3526

second angle stdev: 16.714771

155.81 160.47

120.07 109.64

first angle mean: 163.57927

first angle stdev: 11.422239

second angle mean: 116.35963

second angle stdev: 16.699745

152.77 155.04

122.86 107.43

first angle mean: 163.55887

first angle stdev: 11.421096

second angle mean: 116.37189

second angle stdev: 16.686369

151.81 143.76

127.0 105.79

first angle mean: 163.53676

first angle stdev: 11.4217

second angle mean: 116.39191

second angle stdev: 16.677015

148.07 129.81

134.0 102.78

first angle mean: 163.50769

first angle stdev: 11.430609

second angle mean: 116.425

second angle stdev: 16.678782

150.06 118.42

137.9 99.83

first angle mean: 163.48245

first angle stdev: 11.434699

second angle mean: 116.465294

second angle stdev: 16.689022

152.74 115.22

139.8 97.92

first angle mean: 163.46234

first angle stdev: 11.433424

second angle mean: 116.50899

second angle stdev: 16.703882

154.43 114.59

141.89 95.89

first angle mean: 163.44545

first angle stdev: 11.429395

second angle mean: 116.556435

second angle stdev: 16.724234

154.77 114.43

143.46 93.94

first angle mean: 163.42928

first angle stdev: 11.424863

second angle mean: 116.60662

second angle stdev: 16.74891

159.65 112.81

142.88 93.31

first angle mean: 163.42223

first angle stdev: 11.415382

second angle mean: 116.65555

second angle stdev: 16.771603

160.8 106.1

143.03 92.58

first angle mean: 163.41736

first angle stdev: 11.405328

second angle mean: 116.704575

second angle stdev: 16.794476

162.74 126.31

141.73 93.37

first angle mean: 163.4161

first angle stdev: 11.39478

second angle mean: 116.751

second angle stdev: 16.813414

169.18 153.79

139.78 95.06

first angle mean: 163.42677

first angle stdev: 11.386921

second angle mean: 116.79365

second angle stdev: 16.82699

171.63 155.32

139.0 94.88

first angle mean: 163.44194

first angle stdev: 11.381848

second angle mean: 116.834694

second angle stdev: 16.83847

168.15 155.22

139.26 95.44

first angle mean: 163.45062

first angle stdev: 11.373138

second angle mean: 116.87608

second angle stdev: 16.850433

163.7 158.75

139.32 96.09

first angle mean: 163.45108

first angle stdev: 11.362666

second angle mean: 116.91741

second angle stdev: 16.862389

163.65 156.4

135.71 96.78

first angle mean: 163.45145

first angle stdev: 11.3522215

second angle mean: 116.95195

second angle stdev: 16.866104

156.81 162.14

134.73 99.17

first angle mean: 163.43927

first angle stdev: 11.345362

second angle mean: 116.984566

second angle stdev: 16.86779

152.4 156.26

133.26 99.92

first angle mean: 163.41904

first angle stdev: 11.344791

second angle mean: 117.01438

second angle stdev: 16.8667

150.79 145.28

130.27 100.45

first angle mean: 163.39595

first angle stdev: 11.347248

second angle mean: 117.038605

second angle stdev: 16.860786

151.63 142.38

124.93 103.27

first angle mean: 163.37448

first angle stdev: 11.348006

second angle mean: 117.05301

second angle stdev: 16.848763

146.3 151.78

120.87 107.86

first angle mean: 163.34338

first angle stdev: 11.361018

second angle mean: 117.05997

second angle stdev: 16.834196

148.79 158.36

118.72 111.66

first angle mean: 163.31693

first angle stdev: 11.367605

second angle mean: 117.06298

second angle stdev: 16.819033

150.14 158.3

117.87 115.05

first angle mean: 163.293

first angle stdev: 11.371124

second angle mean: 117.064445

second angle stdev: 16.803799

156.33 158.09

117.74 116.84

first angle mean: 163.2804

first angle stdev: 11.364678

second angle mean: 117.065674

second angle stdev: 16.788597

165.03 153.58

116.0 119.42

first angle mean: 163.28355

first angle stdev: 11.354641

second angle mean: 117.06374

second angle stdev: 16.773472

160.76 147.5

112.62 122.65

first angle mean: 163.279

first angle stdev: 11.344894

second angle mean: 117.05572

second angle stdev: 16.759386

150.79 149.51

110.38 125.59

first angle mean: 163.2565

first angle stdev: 11.347037

second angle mean: 117.04369

second angle stdev: 16.746675

151.41 156.04

108.73 127.93

first angle mean: 163.23518

first angle stdev: 11.347936

second angle mean: 117.02873

second angle stdev: 16.735317

151.76 159.44

106.93 129.03

first angle mean: 163.2146

first angle stdev: 11.348147

second angle mean: 117.010605

second angle stdev: 16.725752

153.01 151.36

104.74 131.05

first angle mean: 163.1963

first angle stdev: 11.346186

second angle mean: 116.98862

second angle stdev: 16.718815

149.21 148.66

103.35 133.42

first angle mean: 163.1713

first angle stdev: 11.351429

second angle mean: 116.96422

second angle stdev: 16.713793

152.9 144.8

102.25 135.71

first angle mean: 163.15294

first angle stdev: 11.349578

second angle mean: 116.93795

second angle stdev: 16.710417

158.59 146.64

101.92 137.0

first angle mean: 163.1448

first angle stdev: 11.34109

second angle mean: 116.91118

second angle stdev: 16.70753

169.65 148.17

100.79 138.03

first angle mean: 163.15639

first angle stdev: 11.334312

second angle mean: 116.88249

second angle stdev: 16.70648

179.35 151.4

98.28 140.28

first angle mean: 163.18513

first angle stdev: 11.344752

second angle mean: 116.84946

second angle stdev: 16.710007

counter:8

TRAINING: Exercise up\_with\_band\_and\_lean done

C:\Users\yaels\יעל פרוייקט גמר\zedcheck\Excel.py:287: UserWarning: Starting a Matplotlib GUI outside of the main thread will likely fail.

plt.plot(plot\_data['x'], plot\_data['y'])

Directory created or already exists: Patients/1111/Graphs/up\_with\_band\_and\_lean/28-06-2024 15-38-21

C:\Users\yaels\יעל פרוייקט גמר\zedcheck\Excel.py:287: UserWarning: Starting a Matplotlib GUI outside of the main thread will likely fail.

plt.plot(plot\_data['x'], plot\_data['y'])

robot count: 6

Directory created or already exists: Patients/1111/Graphs/up\_with\_band\_and\_lean/28-06-2024 15-38-21

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