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 exercises

MP START

ROBOT START

CAMERA: Exercise hello\_waving start

CAMERA: Exercise hello\_waving done

TRAINING: Exercise open\_arms\_above\_head\_ball start

CAMERA: Exercise open\_arms\_above\_head\_ball start

ROBOT: Exercise open\_arms\_above\_head\_ball start

120.53 123.55

135.89 137.58

first angle mean: 120.53

first angle stdev: 0.0

second angle mean: 135.89

second angle stdev: 0.0

121.65 122.09

139.63 137.27

first angle mean: 121.09

first angle stdev: 0.5600014

second angle mean: 137.76001

second angle stdev: 1.8700027

137.18 145.25

154.63 141.38

first angle mean: 126.45333

first angle stdev: 7.5986648

second angle mean: 143.38335

second angle stdev: 8.097842

157.97 157.46

179.93 178.85

first angle mean: 134.33249

first angle stdev: 15.150863

second angle mean: 152.52

second angle stdev: 17.309454

170.24 154.28

143.4 178.71

first angle mean: 141.51399

first angle stdev: 19.746765

second angle mean: 150.696

second angle stdev: 15.906026

172.89 154.78

133.1 178.76

first angle mean: 146.74333

first angle stdev: 21.48663

second angle mean: 147.76332

second angle stdev: 15.932274

174.0 156.49

135.18 178.73

first angle mean: 150.63713

first angle stdev: 22.061102

second angle mean: 145.96571

second angle stdev: 15.39362

173.33 155.43

134.64 178.71

first angle mean: 153.47375

first angle stdev: 21.958597

second angle mean: 144.55

second angle stdev: 14.878602

172.83 154.99

134.74 178.71

first angle mean: 155.62445

first angle stdev: 21.57796

second angle mean: 143.46

second angle stdev: 14.362473

170.8 154.33

140.68 178.73

first angle mean: 157.142

first angle stdev: 20.970797

second angle mean: 143.182

second angle stdev: 13.650938

171.92 154.7

136.2 178.76

first angle mean: 158.48546

first angle stdev: 20.441221

second angle mean: 142.54727

second angle stdev: 13.169516

171.77 153.86

136.6 178.74

first angle mean: 159.59251

first angle stdev: 19.912416

second angle mean: 142.05167

second angle stdev: 12.715542

170.7 152.93

136.71 178.73

first angle mean: 160.44693

first angle stdev: 19.358833

second angle mean: 141.64076

second angle stdev: 12.299339

170.83 153.03

136.67 178.72

first angle mean: 161.18858

first angle stdev: 18.845318

second angle mean: 141.28572

second angle stdev: 11.920877

170.63 151.86

136.18 178.71

first angle mean: 161.81801

first angle stdev: 18.358

second angle mean: 140.94533

second angle stdev: 11.586868

171.08 150.17

138.31 178.67

first angle mean: 162.39688

first angle stdev: 17.915892

second angle mean: 140.78062

second angle stdev: 11.237059

171.43 150.91

140.38 178.71

first angle mean: 162.92824

first angle stdev: 17.51044

second angle mean: 140.75706

second angle stdev: 10.901956

172.07 152.74

141.6 178.76

first angle mean: 163.43611

first angle stdev: 17.145445

second angle mean: 140.8039

second angle stdev: 10.596556

173.07 155.43

144.76 178.78

first angle mean: 163.94316

first angle stdev: 16.826231

second angle mean: 141.01212

second angle stdev: 10.351692

171.91 155.75

146.03 178.8

first angle mean: 164.3415

first angle stdev: 16.491842

second angle mean: 141.26302

second angle stdev: 10.148678

171.06 155.36

145.09 178.79

first angle mean: 164.66144

first angle stdev: 16.15786

second angle mean: 141.44525

second angle stdev: 9.937572

172.17 155.25

143.83 178.78

first angle mean: 165.00273

first angle stdev: 15.863654

second angle mean: 141.55365

second angle stdev: 9.72179

173.78 155.48

142.67 178.76

first angle mean: 165.38435

first angle stdev: 15.617871

second angle mean: 141.60219

second angle stdev: 9.510823

173.06 155.25

142.37 178.8

first angle mean: 165.70416

first angle stdev: 15.36578

second angle mean: 141.63417

second angle stdev: 9.311837

172.92 156.33

143.55 178.84

first angle mean: 165.9928

first angle stdev: 15.121587

second angle mean: 141.71082

second angle stdev: 9.131421

157.28 155.87

179.09 178.9

first angle mean: 165.65768

first angle stdev: 14.922301

second angle mean: 143.14847

second angle stdev: 11.48249

157.79 157.5

173.63 179.01

first angle mean: 165.36629

first angle stdev: 14.718545

second angle mean: 144.27742

second angle stdev: 12.653135

157.41 153.58

164.72 179.13

first angle mean: 165.08214

first angle stdev: 14.528545

second angle mean: 145.0075

second angle stdev: 12.991377

148.91 146.9

174.76 179.23

first angle mean: 164.52448

first angle stdev: 14.577641

second angle mean: 146.03346

second angle stdev: 13.87184

141.95 140.14

174.18 172.39

first angle mean: 163.772

first angle stdev: 14.894453

second angle mean: 146.97168

second angle stdev: 14.54445

137.99 131.66

179.45 162.79

first angle mean: 162.94034

first angle stdev: 15.344023

second angle mean: 148.01938

second angle stdev: 15.4157915

116.77 116.89

133.57 167.07

first angle mean: 161.4975

first angle stdev: 17.106005

second angle mean: 147.56781

second angle stdev: 15.379882

100.75 109.36

134.74 166.18

first angle mean: 159.65666

first angle stdev: 19.803679

second angle mean: 147.1791

second angle stdev: 15.303863

92.08 79.17

140.38 172.57

first angle mean: 157.66911

first angle stdev: 22.605583

second angle mean: 146.97913

second angle stdev: 15.120826

81.55 75.8

144.55 179.63

first angle mean: 155.49428

first angle stdev: 25.636467

second angle mean: 146.90971

second angle stdev: 14.908742

81.71 77.94

142.94 178.6

first angle mean: 153.44472

first angle stdev: 28.035637

second angle mean: 146.79944

second angle stdev: 14.714685

88.18 79.78

135.54 178.21

first angle mean: 151.68082

first angle stdev: 29.610195

second angle mean: 146.49513

second angle stdev: 14.628869

96.26 79.56

151.56 178.43

first angle mean: 150.22237

first angle stdev: 30.535091

second angle mean: 146.62842

second angle stdev: 14.45785

97.73 81.61

138.27 178.81

first angle mean: 148.8764

first angle stdev: 31.262201

second angle mean: 146.4141

second angle stdev: 14.332311

94.85 85.09

126.03 178.95

first angle mean: 147.52576

first angle stdev: 32.00061

second angle mean: 145.9045

second angle stdev: 14.505442

96.59 90.02

127.52 179.1

first angle mean: 146.28342

first angle stdev: 32.569904

second angle mean: 145.45609

second angle stdev: 14.605429

102.16 89.23

131.61 178.83

first angle mean: 145.23286

first angle stdev: 32.8754

second angle mean: 145.12642

second angle stdev: 14.584084

109.21 88.88

134.1 173.47

first angle mean: 144.39513

first angle stdev: 32.94136

second angle mean: 144.87

second angle stdev: 14.508988

128.01 99.06

159.83 175.94

first angle mean: 144.02272

first angle stdev: 32.656303

second angle mean: 145.20999

second angle stdev: 14.515415

143.47 105.45

171.81 174.32

first angle mean: 144.01045

first angle stdev: 32.29152

second angle mean: 145.8011

second angle stdev: 14.879156

151.64 122.43

162.46 170.52

first angle mean: 144.17632

first angle stdev: 31.957972

second angle mean: 146.16325

second angle stdev: 14.915707

157.19 132.91

157.08 159.61

first angle mean: 144.4532

first angle stdev: 31.671886

second angle mean: 146.39552

second angle stdev: 14.840027

162.71 134.0

157.57 155.02

first angle mean: 144.83354

first angle stdev: 31.448523

second angle mean: 146.62834

second angle stdev: 14.771107

168.33 135.88

150.71 153.18

first angle mean: 145.31306

first angle stdev: 31.302761

second angle mean: 146.71164

second angle stdev: 14.630991

171.8 132.58

141.32 147.57

first angle mean: 145.84279

first angle stdev: 31.209232

second angle mean: 146.6038

second angle stdev: 14.503598

170.28 127.81

138.36 140.41

first angle mean: 146.32195

first angle stdev: 31.086935

second angle mean: 146.44215

second angle stdev: 14.4061165

169.89 126.54

143.01 135.89

first angle mean: 146.77518

first angle stdev: 30.95625

second angle mean: 146.37614

second angle stdev: 14.274709

170.99 127.01

140.24 135.08

first angle mean: 147.23207

first angle stdev: 30.839312

second angle mean: 146.26038

second angle stdev: 14.164025

171.83 128.2

136.02 137.18

first angle mean: 147.68759

first angle stdev: 30.731874

second angle mean: 146.07074

second angle stdev: 14.100015

171.79 128.89

136.6 139.4

first angle mean: 148.12582

first angle stdev: 30.621012

second angle mean: 145.89854

second angle stdev: 14.028431

171.13 129.04

137.32 140.81

first angle mean: 148.53662

first angle stdev: 30.498917

second angle mean: 145.74536

second angle stdev: 13.948953

170.33 128.8

138.02 141.29

first angle mean: 148.91896

first angle stdev: 30.365295

second angle mean: 145.60982

second angle stdev: 13.863202

170.57 128.1

137.47 142.21

first angle mean: 149.29227

first angle stdev: 30.23403

second angle mean: 145.46947

second angle stdev: 13.783957

171.7 127.92

135.43 142.35

first angle mean: 149.67206

first angle stdev: 30.115934

second angle mean: 145.2993

second angle stdev: 13.727948

172.71 127.84

135.07 141.39

first angle mean: 150.05602

first angle stdev: 30.009193

second angle mean: 145.12883

second angle stdev: 13.67591

174.43 128.17

134.63 140.99

first angle mean: 150.4556

first angle stdev: 29.922703

second angle mean: 144.95671

second angle stdev: 13.628713

174.82 127.94

135.06 140.04

first angle mean: 150.84857

first angle stdev: 29.83868

second angle mean: 144.79707

second angle stdev: 13.575723

174.2 127.91

136.06 139.71

first angle mean: 151.21922

first angle stdev: 29.744452

second angle mean: 144.65839

second angle stdev: 13.511747

172.54 127.39

138.28 139.26

first angle mean: 151.55234

first angle stdev: 29.629381

second angle mean: 144.55875

second angle stdev: 13.42909

robot count: 1

170.35 127.21

141.25 139.4

first angle mean: 151.84152

first angle stdev: 29.491467

second angle mean: 144.50784

second angle stdev: 13.33161

168.56 126.64

143.32 139.53

first angle mean: 152.09483

first angle stdev: 29.338362

second angle mean: 144.48985

second angle stdev: 13.231022

167.82 125.65

140.52 139.53

first angle mean: 152.32954

first angle stdev: 29.180958

second angle mean: 144.43059

second angle stdev: 13.140733

168.6 124.17

134.59 139.95

first angle mean: 152.5688

first angle stdev: 29.031734

second angle mean: 144.28587

second angle stdev: 13.097426

169.23 124.18

133.46 139.99

first angle mean: 152.81027

first angle stdev: 28.889294

second angle mean: 144.12898

second angle stdev: 13.066383

167.67 125.41

133.96 141.01

first angle mean: 153.02255

first angle stdev: 28.736353

second angle mean: 143.9837

second angle stdev: 13.028719

164.27 127.32

133.89 142.39

first angle mean: 153.18097

first angle stdev: 28.564032

second angle mean: 143.84154

second angle stdev: 12.991208

160.15 128.36

138.42 143.93

first angle mean: 153.27777

first angle stdev: 28.3767

second angle mean: 143.76625

second angle stdev: 12.916269

155.79 128.49

144.78 146.25

first angle mean: 153.3122

first angle stdev: 28.183182

second angle mean: 143.78014

second angle stdev: 12.828037

149.65 128.2

158.03 149.17

first angle mean: 153.26271

first angle stdev: 27.9953

second angle mean: 143.9727

second angle stdev: 12.846857

145.62 127.66

163.79 151.2

first angle mean: 153.16081

first angle stdev: 27.821852

second angle mean: 144.23694

second angle stdev: 12.961778

135.46 122.5

158.01 165.41

first angle mean: 152.9279

first angle stdev: 27.711712

second angle mean: 144.41817

second angle stdev: 12.971516

127.92 118.72

153.75 171.15

first angle mean: 152.60312

first angle stdev: 27.676384

second angle mean: 144.53935

second angle stdev: 12.930247

122.17 116.46

156.02 168.29

first angle mean: 152.21295

first angle stdev: 27.710716

second angle mean: 144.68654

second angle stdev: 12.911855

115.34 112.43

159.37 162.17

first angle mean: 151.7462

first angle stdev: 27.841623

second angle mean: 144.8724

second angle stdev: 12.93446

108.53 102.8

165.18 168.06

first angle mean: 151.20601

first angle stdev: 28.080605

second angle mean: 145.12625

second angle stdev: 13.049888

105.74 95.7

169.17 173.68

first angle mean: 150.6447

first angle stdev: 28.354733

second angle mean: 145.4231

second angle stdev: 13.238051

99.22 86.12

179.28 176.73

first angle mean: 150.01756

first angle stdev: 28.740961

second angle mean: 145.83598

second angle stdev: 13.67178

105.49 75.92

177.18 177.48

first angle mean: 149.4811

first angle stdev: 28.977417

second angle mean: 146.21362

second angle stdev: 14.012839

104.76 71.01

176.98 179.64

first angle mean: 148.9487

first angle stdev: 29.20993

second angle mean: 146.5799

second angle stdev: 14.323288

101.86 71.22

177.79 178.3

first angle mean: 148.39471

first angle stdev: 29.478155

second angle mean: 146.94707

second angle stdev: 14.631055

99.19 68.31

178.47 178.23

first angle mean: 147.82257

first angle stdev: 29.777214

second angle mean: 147.31361

second angle stdev: 14.933147

99.73 69.38

178.71 178.66

first angle mean: 147.26979

first angle stdev: 30.046137

second angle mean: 147.67448

second angle stdev: 15.219583

99.79 71.72

178.8 178.91

first angle mean: 146.73022

first angle stdev: 30.295837

second angle mean: 148.02818

second angle stdev: 15.488301

100.15 79.39

178.77 178.79

first angle mean: 146.20685

first angle stdev: 30.522615

second angle mean: 148.3736

second angle stdev: 15.738216

100.81 82.88

178.66 179.62

first angle mean: 145.70244

first angle stdev: 30.723324

second angle mean: 148.71011

second angle stdev: 15.969281

99.55 85.15

178.65 179.85

first angle mean: 145.19527

first angle stdev: 30.930565

second angle mean: 149.03912

second angle stdev: 16.18511

105.74 93.21

179.02 176.36

first angle mean: 144.7664

first angle stdev: 31.032848

second angle mean: 149.365

second angle stdev: 16.39434

115.1 99.36

170.79 172.43

first angle mean: 144.44742

first angle stdev: 31.016838

second angle mean: 149.59538

second angle stdev: 16.455

124.38 109.36

177.37 159.78

first angle mean: 144.23393

first angle stdev: 30.920029

second angle mean: 149.89085

second angle stdev: 16.613426

133.3 119.7

179.45 147.64

first angle mean: 144.11884

first angle stdev: 30.777098

second angle mean: 150.20201

second angle stdev: 16.798843

140.49 129.18

171.35 163.42

first angle mean: 144.08104

first angle stdev: 30.618597

second angle mean: 150.42229

second angle stdev: 16.848494

147.92 138.83

173.42 179.92

first angle mean: 144.1206

first angle stdev: 30.462828

second angle mean: 150.65938

second angle stdev: 16.921629

153.42 145.7

166.47 177.69

first angle mean: 144.2155

first angle stdev: 30.321415

second angle mean: 150.82071

second angle stdev: 16.909891

155.53 147.92

160.43 177.89

first angle mean: 144.32979

first angle stdev: 30.189095

second angle mean: 150.91777

second angle stdev: 16.851688

156.51 146.76

157.12 178.74

first angle mean: 144.4516

first angle stdev: 30.062208

second angle mean: 150.9798

second angle stdev: 16.77857

158.34 146.55

155.46 179.04

first angle mean: 144.5891

first angle stdev: 29.944605

second angle mean: 151.02415

second angle stdev: 16.701193

163.55 145.42

143.43 179.22

first angle mean: 144.775

first angle stdev: 29.85596

second angle mean: 150.94969

second angle stdev: 16.635958

169.88 143.79

137.02 179.06

first angle mean: 145.01872

first angle stdev: 29.812477

second angle mean: 150.81445

second angle stdev: 16.611252

169.06 143.12

141.65 178.9

first angle mean: 145.24991

first angle stdev: 29.761417

second angle mean: 150.72635

second angle stdev: 16.55537

167.25 142.92

145.67 178.79

first angle mean: 145.45943

first angle stdev: 29.69633

second angle mean: 150.67819

second angle stdev: 16.483665

167.01 143.47

145.06 178.81

first angle mean: 145.66273

first angle stdev: 29.62925

second angle mean: 150.6252

second angle stdev: 16.414715

165.85 142.84

146.11 178.83

first angle mean: 145.8514

first angle stdev: 29.554373

second angle mean: 150.583

second angle stdev: 16.343605

163.5 140.95

148.7 178.83

first angle mean: 146.01482

first angle stdev: 29.465755

second angle mean: 150.56557

second angle stdev: 16.268764

161.43 140.61

154.74 178.85

first angle mean: 146.15623

first angle stdev: 29.367079

second angle mean: 150.60385

second angle stdev: 16.198856

160.77 141.26

157.57 178.9

first angle mean: 146.28908

first angle stdev: 29.266174

second angle mean: 150.66719

second angle stdev: 16.138605

159.73 141.28

156.01 178.93

first angle mean: 146.41017

first angle stdev: 29.16171

second angle mean: 150.71532

second angle stdev: 16.073673

159.11 140.16

154.94 178.94

first angle mean: 146.52357

first angle stdev: 29.055805

second angle mean: 150.75304

second angle stdev: 16.00669

157.86 141.62

152.68 178.91

first angle mean: 146.6239

first angle stdev: 28.94643

second angle mean: 150.77008

second angle stdev: 15.936728

robot count: 2160.56

144.09

143.5 178.91

first angle mean: 146.74614

first angle stdev: 28.848476

second angle mean: 150.70631

second angle stdev: 15.881151

163.25 148.46

137.7 178.9

first angle mean: 146.88966

first angle stdev: 28.763617

second angle mean: 150.5932

second angle stdev: 15.857997

166.0 147.54

137.22 178.96

first angle mean: 147.0544

first angle stdev: 28.693806

second angle mean: 150.47792

second angle stdev: 15.837822

167.04 146.7

136.31 178.94

first angle mean: 147.2252

first angle stdev: 28.630096

second angle mean: 150.35684

second angle stdev: 15.8238325

164.2 148.22

135.96 178.95

first angle mean: 147.36906

first angle stdev: 28.550955

second angle mean: 150.23483

second angle stdev: 15.81181

158.78 148.24

142.45 178.9

first angle mean: 147.46494

first angle stdev: 28.449812

second angle mean: 150.16942

second angle stdev: 15.761262

153.02 143.95

154.21 179.23

first angle mean: 147.51125

first angle stdev: 28.335526

second angle mean: 150.2031

second angle stdev: 15.69975

146.04 141.61

167.79 179.24

first angle mean: 147.49908

first angle stdev: 28.218508

second angle mean: 150.34843

second angle stdev: 15.715602

140.85 140.63

177.61 177.36

first angle mean: 147.44458

first angle stdev: 28.109016

second angle mean: 150.57188

second angle stdev: 15.842903

136.32 136.63

176.93 175.98

first angle mean: 147.35414

first angle stdev: 28.012335

second angle mean: 150.78618

second angle stdev: 15.954916

132.27 131.44

177.1 175.06

first angle mean: 147.23248

first angle stdev: 27.931755

second angle mean: 150.99838

second angle stdev: 16.063793

129.32 126.93

178.15 172.08

first angle mean: 147.08919

first angle stdev: 27.86553

second angle mean: 151.21559

second angle stdev: 16.181211

126.99 122.04

178.92 172.66

first angle mean: 146.92967

first angle stdev: 27.811974

second angle mean: 151.43547

second angle stdev: 16.303274

120.65 109.31

138.1 164.61

first angle mean: 146.72275

first angle stdev: 27.799469

second angle mean: 151.33046

second angle stdev: 16.281681

109.77 100.09

125.62 164.08

first angle mean: 146.43407

first angle stdev: 27.881132

second angle mean: 151.12961

second angle stdev: 16.375164

103.76 94.45

125.63 164.62

first angle mean: 146.10326

first angle stdev: 28.0239

second angle mean: 150.93193

second angle stdev: 16.464167

97.85 88.79

134.46 170.73

first angle mean: 145.73207

first angle stdev: 28.23244

second angle mean: 150.80522

second angle stdev: 16.463741

91.38 87.35

137.56 179.3

first angle mean: 145.31718

first angle stdev: 28.51955

second angle mean: 150.7041

second angle stdev: 16.441248

88.12 83.7

161.27 177.93

first angle mean: 144.88387

first angle stdev: 28.840933

second angle mean: 150.78415

second angle stdev: 16.404453

88.01 78.17

179.18 177.43

first angle mean: 144.45624

first angle stdev: 29.14932

second angle mean: 150.99765

second angle stdev: 16.52573

88.54 76.5

177.44 177.98

first angle mean: 144.03894

first angle stdev: 29.436388

second angle mean: 151.19499

second angle stdev: 16.620487

90.73 77.58

177.62 178.52

first angle mean: 143.64407

first angle stdev: 29.68126

second angle mean: 151.39075

second angle stdev: 16.713123

94.23 80.36

178.66 178.8

first angle mean: 143.28073

first angle stdev: 29.87175

second angle mean: 151.59125

second angle stdev: 16.813751

103.37 85.07

179.13 178.92

first angle mean: 142.98943

first angle stdev: 29.955801

second angle mean: 151.79225

second angle stdev: 16.915493

108.25 87.7

179.07 178.9

first angle mean: 142.73769

first angle stdev: 29.992153

second angle mean: 151.98993

second angle stdev: 17.01215

106.36 95.75

178.77 175.47

first angle mean: 142.47597

first angle stdev: 30.0418

second angle mean: 152.18259

second angle stdev: 17.101273

113.25 104.77

178.59 159.75

first angle mean: 142.26721

first angle stdev: 30.035326

second angle mean: 152.3712

second angle stdev: 17.18459

122.83 115.06

178.47 143.47

first angle mean: 142.12936

first angle stdev: 29.973042

second angle mean: 152.5563

second angle stdev: 17.263031

132.41 126.43

178.42 153.78

first angle mean: 142.06091

first angle stdev: 29.878374

second angle mean: 152.73845

second angle stdev: 17.337566

139.94 133.65

178.51 166.82

first angle mean: 142.04608

first angle stdev: 29.774244

second angle mean: 152.91867

second angle stdev: 17.409803

149.18 140.55

178.65 163.96

first angle mean: 142.09563

first angle stdev: 29.676596

second angle mean: 153.09735

second angle stdev: 17.480341

150.84 147.4

173.92 166.15

first angle mean: 142.15593

first angle stdev: 29.582937

second angle mean: 153.24097

second angle stdev: 17.504988

139.89 151.2

160.12 165.69

first angle mean: 142.14041

first angle stdev: 29.482044

second angle mean: 153.28807

second angle stdev: 17.45416

130.98 149.7

151.41 176.56

first angle mean: 142.0645

first angle stdev: 29.395912

second angle mean: 153.2753

second angle stdev: 17.395376

126.86 145.59

149.38 178.55

first angle mean: 141.96176

first angle stdev: 29.3229

second angle mean: 153.24898

second angle stdev: 17.339445

122.48 144.47

153.49 178.46

first angle mean: 141.83101

first angle stdev: 29.267591

second angle mean: 153.25061

second angle stdev: 17.281172

119.62 151.01

152.56 162.46

first angle mean: 141.68294

first angle stdev: 29.225813

second angle mean: 153.24599

second angle stdev: 17.223564

122.12 157.02

151.4 148.17

first angle mean: 141.55338

first angle stdev: 29.172064

second angle mean: 153.23378

second angle stdev: 17.16709

124.39 160.76

152.67 140.38

first angle mean: 141.44046

first angle stdev: 29.109034

second angle mean: 153.23007

second angle stdev: 17.110588

124.51 160.51

155.38 137.48

first angle mean: 141.3298

first angle stdev: 29.045807

second angle mean: 153.24413

second angle stdev: 17.055458

123.24 158.41

155.0 135.37

first angle mean: 141.21233

first angle stdev: 28.987787

second angle mean: 153.25552

second angle stdev: 17.000578

122.41 156.15

154.27 134.07

first angle mean: 141.09103

first angle stdev: 28.933315

second angle mean: 153.26207

second angle stdev: 16.945845

122.17 154.75

154.11 133.84

first angle mean: 140.96974

first angle stdev: 28.879934

second angle mean: 153.2675

second angle stdev: 16.891579

121.98 154.89

154.15 133.54

first angle mean: 140.84879

first angle stdev: 28.827425

second angle mean: 153.27313

second angle stdev: 16.837845

122.21 155.22

152.72 133.61

first angle mean: 140.73082

first angle stdev: 28.774044

second angle mean: 153.26962

second angle stdev: 16.784533

124.18 156.42

152.09 133.82

first angle mean: 140.62672

first angle stdev: 28.713245

second angle mean: 153.2622

second angle stdev: 16.731928

124.11 157.23

151.4 137.34

first angle mean: 140.52351

first angle stdev: 28.652958

second angle mean: 153.25056

second angle stdev: 16.680204

121.33 157.04

148.83 143.98

first angle mean: 140.40428

first angle stdev: 28.603611

second angle mean: 153.22311

second angle stdev: 16.631948

121.1 154.2

146.47 147.77

first angle mean: 140.28513

first angle stdev: 28.55525

second angle mean: 153.18143

second angle stdev: 16.58897

robot count: 3

120.89 151.33

145.1 156.89

first angle mean: 140.16614

first angle stdev: 28.507778

second angle mean: 153.13184

second angle stdev: 16.55004

122.73 143.53

151.55 179.7

first angle mean: 140.05981

first angle stdev: 28.453129

second angle mean: 153.1222

second angle stdev: 16.499966

120.15 139.72

155.64 175.84

first angle mean: 139.93916

first angle stdev: 28.408833

second angle mean: 153.13745

second angle stdev: 16.45105

107.99 129.51

163.16 170.06

first angle mean: 139.74669

first angle stdev: 28.430828

second angle mean: 153.19783

second angle stdev: 16.41975

76.07 120.81

170.41 174.2

first angle mean: 139.3654

first angle stdev: 28.768147

second angle mean: 153.3009

second angle stdev: 16.424286

66.45 117.33

170.45 174.99

first angle mean: 138.93137

first angle stdev: 29.225645

second angle mean: 153.40297

second angle stdev: 16.428377

65.08 109.43

174.01 169.43

first angle mean: 138.49438

first angle stdev: 29.684435

second angle mean: 153.52492

second angle stdev: 16.455772

63.94 102.01

174.49 168.18

first angle mean: 138.05583

first angle stdev: 30.141106

second angle mean: 153.64822

second angle stdev: 16.485443

80.3 93.22

179.78 177.63

first angle mean: 137.71806

first angle stdev: 30.373781

second angle mean: 153.80106

second angle stdev: 16.557493

89.58 80.8

178.1 178.56

first angle mean: 137.4382

first angle stdev: 30.50569

second angle mean: 153.94232

second angle stdev: 16.61233

89.02 73.93

178.42 178.79

first angle mean: 137.15833

first angle stdev: 30.638054

second angle mean: 154.08382

second angle stdev: 16.667862

93.13 71.93

178.8 178.79

first angle mean: 136.90529

first angle stdev: 30.730642

second angle mean: 154.22586

second angle stdev: 16.724583

87.41 79.02

179.2 178.85

first angle mean: 136.62245

first angle stdev: 30.868996

second angle mean: 154.36858

second angle stdev: 16.782639

92.55 96.22

179.26 178.84

first angle mean: 136.37206

first angle stdev: 30.95891

second angle mean: 154.51001

second angle stdev: 16.83915

102.84 103.48

151.76 179.89

first angle mean: 136.1826

first angle stdev: 30.973473

second angle mean: 154.49446

second angle stdev: 16.79278

107.77 114.43

128.86 164.36

first angle mean: 136.02298

first angle stdev: 30.959263

second angle mean: 154.35045

second angle stdev: 16.854797

132.91 133.86

159.47 174.88

first angle mean: 136.00558

first angle stdev: 30.873537

second angle mean: 154.37906

second angle stdev: 16.811981

148.25 147.54

164.69 177.7

first angle mean: 136.07361

first angle stdev: 30.801105

second angle mean: 154.43634

second angle stdev: 16.782724

158.16 149.85

160.96 178.88

first angle mean: 136.19563

first angle stdev: 30.7595

second angle mean: 154.47238

second angle stdev: 16.743282

160.95 150.54

150.8 179.36

first angle mean: 136.33165

first angle stdev: 30.729408

second angle mean: 154.45221

second angle stdev: 16.699429

counter:1

158.78 150.72

155.61 178.88

first angle mean: 136.45432

first angle stdev: 30.689985

second angle mean: 154.45853

second angle stdev: 16.65396

156.08 149.33

158.39 178.73

first angle mean: 136.56097

first angle stdev: 30.640465

second angle mean: 154.47989

second angle stdev: 16.611156

155.69 147.89

158.1 178.8

first angle mean: 136.66438

first angle stdev: 30.589714

second angle mean: 154.49947

second angle stdev: 16.568327

155.85 146.9

158.39 178.87

first angle mean: 136.76753

first angle stdev: 30.539616

second angle mean: 154.52037

second angle stdev: 16.526176

155.98 146.43

161.38 178.96

first angle mean: 136.87027

first angle stdev: 30.49006

second angle mean: 154.55705

second angle stdev: 16.489521

157.68 147.21

164.39 179.0

first angle mean: 136.98096

first angle stdev: 30.446516

second angle mean: 154.60936

second angle stdev: 16.461153

159.43 149.06

157.79 179.03

first angle mean: 137.09973

first angle stdev: 30.409502

second angle mean: 154.62619

second angle stdev: 16.419168

158.61 150.2

153.57 179.09

first angle mean: 137.21295

first angle stdev: 30.369282

second angle mean: 154.62064

second angle stdev: 16.376081

153.93 149.09

160.03 179.14

first angle mean: 137.30048

first angle stdev: 30.313692

second angle mean: 154.64896

second angle stdev: 16.33782

149.38 147.41

166.94 179.14

first angle mean: 137.36339

first angle stdev: 30.247149

second angle mean: 154.71297

second angle stdev: 16.319218

140.81 139.06

179.68 179.35

first angle mean: 137.38124

first angle stdev: 30.1697

second angle mean: 154.84233

second angle stdev: 16.375288

131.06 129.66

177.43 167.73

first angle mean: 137.34865

first angle stdev: 30.095247

second angle mean: 154.95876

second angle stdev: 16.412928

112.93 114.13

179.26 161.65

first angle mean: robot count: 4

137.22343

first angle stdev: 30.068611

second angle mean: 155.08339

second angle stdev: 16.462553

89.04 94.16

179.38 170.15

first angle mean: 136.9776

first angle stdev: 30.18763

second angle mean: 155.20735

second angle stdev: 16.511496

89.39 93.54

178.84 178.13

first angle mean: 136.73604

first angle stdev: 30.300236

second angle mean: 155.32732

second angle stdev: 16.554945

92.23 90.77

178.91 171.96

first angle mean: 136.51126

first angle stdev: 30.387838

second angle mean: 155.44641

second angle stdev: 16.59749

98.85 89.88

140.55 179.63

first angle mean: 136.322

first angle stdev: 30.428148

second angle mean: 155.37157

second angle stdev: 16.589209

134.07 120.96

179.51 169.3

first angle mean: 136.31075

first angle stdev: 30.352396

second angle mean: 155.49225

second angle stdev: 16.63504

138.51 125.16

173.57 165.24

first angle mean: 136.32169

first angle stdev: 30.277195

second angle mean: 155.58218

second angle stdev: 16.642284

166.45 154.57

139.01 173.69

first angle mean: 136.47084

first angle stdev: 30.276093

second angle mean: 155.50015

second angle stdev: 16.641737

158.39 159.13

147.26 174.32

first angle mean: 136.57881

first angle stdev: 30.240393

second angle mean: 155.45955

second angle stdev: 16.610718

counter:2

129.54 134.56

172.95 166.24

first angle mean: 136.54431

first angle stdev: 30.17019

second angle mean: 155.54529

second angle stdev: 16.614922

107.65 113.33

166.04 160.75

first angle mean: 136.40335

first angle stdev: 30.163769

second angle mean: 155.59648

second angle stdev: 16.59047

126.15 124.36

132.6 60.99

first angle mean: 136.35359

first angle stdev: 30.098904

second angle mean: 155.48485

second angle stdev: 16.627153

102.42 71.67

178.82 179.46

first angle mean: 136.18965

first angle stdev: 30.118155

second angle mean: 155.59758

second angle stdev: 16.66567

94.75 68.13

177.36 178.8

first angle mean: 135.99043

first angle stdev: 30.182089

second angle mean: 155.70221

second angle stdev: 16.69357

91.77 67.78

177.19 178.79

first angle mean: 135.77885

first angle stdev: 30.264027

second angle mean: 155.80502

second angle stdev: 16.719465

95.95 79.63

179.77 178.79

first angle mean: 135.58919

first angle stdev: 30.316132

second angle mean: 155.91914

second angle stdev: 16.761002

97.0 103.18

178.61 179.31

first angle mean: 135.40631

first angle stdev: 30.360107

second angle mean: 156.02667

second angle stdev: 16.7937

111.16 112.22

178.79 162.12

first angle mean: 135.29193

first angle stdev: 30.333946

second angle mean: 156.13405

second angle stdev: 16.826488

127.12 127.67

172.63 161.56

first angle mean: 135.25357

first angle stdev: 30.26781

second angle mean: 156.21149

second angle stdev: 16.824774

robot count: 5

139.19 137.17

163.32 163.41

first angle mean: 135.27196

first angle stdev: 30.198202

second angle mean: 156.2447

second angle stdev: 16.792418

150.59 146.09

161.85 177.9

first angle mean: 135.3432

first angle stdev: 30.145912

second angle mean: 156.27078

second angle stdev: 16.75766

154.4 148.75

159.29 178.07

first angle mean: 135.43143

first angle stdev: 30.103859

second angle mean: 156.28477

second angle stdev: 16.72008

156.96 150.03

159.29 178.16

first angle mean: 135.53064

first angle stdev: 30.069788

second angle mean: 156.29861

second angle stdev: 16.68275

counter:3

162.93 148.46

156.71 178.81

first angle mean: 135.65633

first angle stdev: 30.057817

second angle mean: 156.3005

second angle stdev: 16.644468

159.53 148.02

154.4 179.19

first angle mean: 135.76534

first angle stdev: 30.032274

second angle mean: 156.29184

second angle stdev: 16.606916

155.04 148.27

157.26 179.42

first angle mean: 135.85295

first angle stdev: 29.99198

second angle mean: 156.29623

second angle stdev: 16.56926

157.32 142.04

153.15 179.11

first angle mean: 135.95009

first angle stdev: 29.95871

second angle mean: 156.282

second angle stdev: 16.53308

159.91 142.96

144.19 178.93

first angle mean: 136.05801

first angle stdev: 29.93419

second angle mean: 156.22752

second angle stdev: 16.515661

162.02 144.05

142.01 178.87

first angle mean: 136.17444

first angle stdev: 29.917328

second angle mean: 156.16379

second angle stdev: 16.505947

166.27 144.83

142.54 178.94

first angle mean: 136.30879

first angle stdev: 29.917824

second angle mean: 156.10294

second angle stdev: 16.494087

166.75 148.37

144.95 179.07

first angle mean: 136.44409

first angle stdev: 29.919865

second angle mean: 156.05338

second angle stdev: 16.474106

164.19 150.63

141.89 179.09

first angle mean: 136.56685

first angle stdev: 29.910343

second angle mean: 155.9907

second angle stdev: 16.464476

159.11 150.61

143.52 179.07

first angle mean: 136.66617

first angle stdev: 29.881706

second angle mean: 155.93576

second angle stdev: 16.448917

152.08 146.98

153.15 179.23

first angle mean: 136.73378

first angle stdev: 29.833496

second angle mean: 155.92355

second angle stdev: 16.413837

143.29 142.89

168.04 169.19

first angle mean: 136.7624

first angle stdev: 29.771427

second angle mean: 155.97646

second angle stdev: 16.397436

134.36 133.7

179.39 163.63

first angle mean: 136.75197

first angle stdev: 29.707054

second angle mean: 156.07826

second angle stdev: 16.434109

125.66 124.81

176.35 164.83

first angle mean: 136.70395

first angle stdev: 29.651627

second angle mean: 156.166

second angle stdev: 16.452417

118.6 117.75

176.84 168.36

first angle mean: 136.62592

first angle stdev: 29.611416

second angle mean: 156.25511

second angle stdev: 16.472694

112.21 106.11

178.08 167.45

first angle mean: 136.52112

first angle stdev: 29.590881

second angle mean: 156.3488

second angle stdev: 16.49911

106.55 91.8

178.55 174.48

first angle mean: 136.39304

first angle stdev: 29.592237

second angle mean: 156.44368

second angle stdev: 16.52739

90.08 84.99

178.78 179.89

first angle mean: 136.19595

first angle stdev: 29.6827

second angle mean: 156.53873

second angle stdev: 16.556156

69.31 81.42

178.99 174.88

first angle mean: 135.91254

first angle stdev: 29.936691

second angle mean: 156.63385

second angle stdev: 16.585283

64.5 83.55

179.03 179.74

first angle mean: 135.61122

first angle stdev: 30.22997

second angle mean: 156.72835

second angle stdev: 16.613804

60.57 93.13

176.04 178.11

first angle mean: 135.29593

first angle stdev: 30.554417

second angle mean: 156.80948

second angle stdev: 16.625856

89.44 89.2

179.12 178.11

first angle mean: 135.10406

first angle stdev: 30.633766

second angle mean: 156.90283

second angle stdev: 16.653423

101.93 94.49

179.01 178.43

first angle mean: 134.96584

first angle stdev: 30.644478

second angle mean: 156.99495

second angle stdev: 16.679592

113.73 105.3

178.7 175.48

first angle mean: 134.87772

first angle stdev: 30.611286

second angle mean: 157.08504

second angle stdev: 16.703325

120.53 112.64

169.36 165.18

first angle mean: 134.81844

first angle stdev: 30.561836

second angle mean: 157.13576

second angle stdev: 16.687366

130.15 122.35

151.57 158.22

first angle mean: 134.79922

first angle stdev: 30.50035

second angle mean: 157.11285

second angle stdev: 16.656807

139.27 134.58

124.87 171.2

first angle mean: 134.81754

first angle stdev: 30.439127

second angle mean: 156.9807

second angle stdev: 16.749786

150.02 141.07

134.23 179.09

first angle mean: 134.8796

first angle stdev: 30.3924

second angle mean: 156.88783

second angle stdev: 16.778385

157.48 144.65

152.04 178.08

first angle mean: 134.97147

first angle stdev: 30.364635

second angle mean: 156.86812

second angle stdev: 16.74709

162.61 149.34

162.85 175.72

first angle mean: 135.08336

first angle stdev: 30.353886

second angle mean: 156.89233

second angle stdev: 16.71747

161.94 153.91

168.66 171.05

first angle mean: 135.19167

first angle stdev: 30.340399

second angle mean: 156.9398

second angle stdev: 16.70039

counter:4

154.51 163.56

169.18 141.56

first angle mean: 135.26923

first angle stdev: 30.304054

second angle mean: 156.98895

second angle stdev: 16.68479

154.82 164.1

161.5 134.74

first angle mean: 135.34744

first angle stdev: 30.268553

second angle mean: 157.007

second angle stdev: 16.653822

158.12 163.66

153.16 134.67

first angle mean: 135.43817

first angle stdev: 30.242237

second angle mean: 156.99167

second angle stdev: 16.62238

157.15 163.72

156.62 134.19

first angle mean: 135.52434

first angle stdev: 30.213024

second angle mean: 156.9902

second angle stdev: 16.589382

158.98 163.01

153.99 131.32

first angle mean: 135.61703

first angle stdev: 30.18915

second angle mean: 156.97833

second angle stdev: 16.557634

158.93 161.82

154.42 130.95

first angle mean: 135.70882

first angle stdev: 30.165012

second angle mean: 156.96828

second angle stdev: 16.525785

164.67 159.12

139.21 142.32

first angle mean: 135.8224

first angle stdev: 30.160172

second angle mean: 156.89862

second angle stdev: 16.530651

163.31 156.6

118.21 153.32

first angle mean: 135.92978

first angle stdev: 30.150002

second angle mean: 156.7475

second angle stdev: 16.673904

156.13 153.87

127.61 154.6

first angle mean: 136.00836

first angle stdev: 30.117554

second angle mean: 156.63412

second angle stdev: 16.74001

149.21 151.04

150.43 156.86

first angle mean: 136.05954

first angle stdev: 30.070322

second angle mean: 156.61008

second angle stdev: 16.711983

144.68 148.25

161.05 160.47

first angle mean: 136.09282

first angle stdev: 30.016975

second angle mean: 156.62721

second angle stdev: 16.681961

robot count: 6

139.65 141.56

164.61 173.84

first angle mean: 136.10649

first angle stdev: 29.960005

second angle mean: 156.65793

second angle stdev: 16.65718

134.18 133.82

173.93 169.88

first angle mean: 136.0991

first angle stdev: 29.902792

second angle mean: 156.7241

second angle stdev: 16.659449

128.35 128.22

178.11 167.43

first angle mean: 136.06953

first angle stdev: 29.849495

second angle mean: 156.80573

second angle stdev: 16.679834

116.58 121.23

153.66 168.01

first angle mean: 135.99542

first angle stdev: 29.816832

second angle mean: 156.79378

second angle stdev: 16.64922

108.54 117.88

144.11 170.59

first angle mean: 135.89143

first angle stdev: 29.808058

second angle mean: 156.74573

second angle stdev: 16.635914

97.1 109.22

151.77 165.83

first angle mean: 135.74504

first angle stdev: 29.84668

second angle mean: 156.72694

second angle stdev: 16.607298

87.79 99.43

174.07 166.57

first angle mean: 135.56476

first angle stdev: 29.934732

second angle mean: 156.79214

second angle stdev: 16.609997

78.63 86.68

178.08 173.01

first angle mean: 135.35153

first angle stdev: 30.080349

second angle mean: 156.87187

second angle stdev: 16.62978

73.46 79.42

178.4 179.98

first angle mean: 135.1206

first angle stdev: 30.260386

second angle mean: 156.95221

second angle stdev: 16.650543

79.54 79.41

178.47 177.71

first angle mean: 134.91397

first angle stdev: 30.392899

second angle mean: 157.0322

second angle stdev: 16.671076

88.38 86.34

178.66 177.29

first angle mean: 134.74164

first angle stdev: 30.467972

second angle mean: 157.1123

second angle stdev: 16.691957

95.77 92.96

178.73 178.28

first angle mean: 134.59781

first angle stdev: 30.50337

second angle mean: 157.19206

second angle stdev: 16.712612

100.92 98.18

178.65 177.54

first angle mean: 134.474

first angle stdev: 30.515394

second angle mean: 157.27097

second angle stdev: 16.732338

99.02 102.36

178.86 171.9

first angle mean: 134.34413

first angle stdev: 30.534666

second angle mean: 157.35005

second angle stdev: 16.752512

112.39 110.46

173.9 164.89

first angle mean: 134.264

first angle stdev: 30.507635

second angle mean: 157.41045

second angle stdev: 16.751667

119.86 120.37

147.01 165.18

first angle mean: 134.21164

first angle stdev: 30.464455

second angle mean: 157.37263

second angle stdev: 16.732897

130.83 130.33

152.59 170.49

first angle mean: 134.19939

first angle stdev: 30.409895

second angle mean: 157.3553

second angle stdev: 16.705029

142.1 137.47

161.64 175.04

first angle mean: 134.2279

first angle stdev: 30.358652

second angle mean: 157.37077

second angle stdev: 16.676826

150.62 144.23

164.66 179.69

first angle mean: 134.28687

first angle stdev: 30.319887

second angle mean: 157.39697

second angle stdev: 16.652525

154.22 146.47

158.55 178.27

first angle mean: 134.3583

first angle stdev: 30.288935

second angle mean: 157.40111

second angle stdev: 16.622797

156.67 147.64

150.77 177.95

first angle mean: 134.438

first angle stdev: 30.264082

second angle mean: 157.37743

second angle stdev: 16.597801

157.15 146.79

149.91 178.47

first angle mean: 134.51883

first angle stdev: 30.24044

second angle mean: 157.35086

second angle stdev: 16.574207

156.62 147.28

153.86 178.74

first angle mean: 134.5972

first angle stdev: 30.215351

second angle mean: 157.33849

second angle stdev: 16.546097

155.88 147.27

158.84 178.84

first angle mean: 134.6724

first angle stdev: 30.188349

second angle mean: 157.34378

second angle stdev: 16.517078

155.77 147.35

160.41 178.86

first angle mean: 134.7467

first angle stdev: 30.161053

second angle mean: 157.35458

second angle stdev: 16.488974

156.28 146.94

160.5 178.9

first angle mean: 134.82225

first angle stdev: 30.135006

second angle mean: 157.36563

second angle stdev: 16.46107

159.24 147.12

158.63 178.83

first angle mean: 134.90762

first angle stdev: 30.116785

second angle mean: 157.37004

second angle stdev: 16.432436

160.68 150.51

158.5 178.89

first angle mean: 134.99742

first angle stdev: 30.1026

second angle mean: 157.37398

second angle stdev: 16.40392

counter:5

160.66 153.51

165.79 179.23

first angle mean: 135.08652

first angle stdev: 30.088186

second angle mean: 157.4032

second angle stdev: 16.382896

161.99 152.35

153.52 179.15

first angle mean: 135.17963

first angle stdev: 30.077604

second angle mean: 157.38976

second angle stdev: 16.356117

157.01 150.19

147.99 179.07

first angle mean: 135.25488

first angle stdev: 30.05296

second angle mean: 157.35735

second angle stdev: 16.337189

150.0 148.38

152.46 179.28

first angle mean: 135.30556

first angle stdev: 30.013685

second angle mean: 157.34052

second angle stdev: 16.311611

144.17 146.15

163.26 179.97

first angle mean: 135.33592

first angle stdev: 29.96672

second angle mean: 157.3608

second angle stdev: 16.287327

140.55 143.01

175.03 168.49

first angle mean: 135.35373

first angle stdev: 29.917086

second angle mean: 157.42108

second angle stdev: 16.292133

136.66 137.14

179.43 158.82

first angle mean: 135.35815

first angle stdev: 29.86626

second angle mean: 157.49594

second angle stdev: 16.3148

133.65 131.37

177.13 161.94

first angle mean: 135.35237

first angle stdev: 29.815762

second angle mean: 157.5625

second angle stdev: 16.327057

129.83 126.0

179.76 161.15

first angle mean: 135.33372

first angle stdev: 29.767078

second angle mean: 157.6375

second angle stdev: 16.350266

117.76 118.45

146.95 159.37

first angle mean: 135.27454

first angle stdev: 29.734356

second angle mean: 157.60152

second angle stdev: 16.334454

106.03 113.99

127.87 162.52

first angle mean: 135.1764

first angle stdev: 29.732565

second angle mean: 157.50174

second angle stdev: 16.397419

88.47 95.17

139.69 162.64

first angle mean: 135.0202

first angle stdev: 29.805038

second angle mean: 157.44218

second angle stdev: 16.402246

78.69 87.58

156.11 159.33

first angle mean: 134.83243

first angle stdev: 29.931938

second angle mean: 157.43773

second angle stdev: 16.375067

71.26 88.37

167.5 173.85

first angle mean: 134.62123

first angle stdev: 30.105259

second angle mean: 157.47116

second angle stdev: 16.358093

66.32 90.73

178.79 178.78

first angle mean: 134.39507

first angle stdev: 30.31042

second angle mean: 157.54175

second angle stdev: 16.376846

69.2 94.96

176.12 178.55

first angle mean: 134.1799

first angle stdev: 30.490505

second angle mean: 157.60307

second angle stdev: 16.384483

81.79 96.33

176.32 178.67

first angle mean: 134.00755

first angle stdev: 30.587769

second angle mean: 157.66464

second angle stdev: 16.392584

96.44 99.89

178.33 176.44

first angle mean: 133.88438

first angle stdev: 30.613007

second angle mean: 157.7324

second angle stdev: 16.408274

108.94 106.27

178.58 166.06

first angle mean: 133.80287

first angle stdev: 30.596083

second angle mean: 157.80052

second angle stdev: 16.424593

118.46 114.15

162.21 160.73

first angle mean: 133.7529

first angle stdev: 30.55872

second angle mean: 157.8149

second angle stdev: 16.399746

131.6 124.69

167.01 162.33

first angle mean: 133.74591

first angle stdev: 30.509315

second angle mean: 157.84474

second angle stdev: 16.381454

142.46 132.85

177.1 168.33

first angle mean: 133.77411

first angle stdev: 30.46393

second angle mean: 157.90706

second angle stdev: 16.391449

robot count: 7149.86

140.62

173.55 167.27

first angle mean: 133.82599

first angle stdev: 30.42843

second angle mean: 157.9575

second angle stdev: 16.389013

157.55 149.7

169.28 162.69

first angle mean: 133.90228

first angle stdev: 30.409145

second angle mean: 157.99393

second angle stdev: 16.375193

162.85 156.83

163.0 164.3

first angle mean: 133.99507

first angle stdev: 30.404432

second angle mean: 158.00996

second angle stdev: 16.351377

counter:6

168.88 157.19

139.28 179.67

first angle mean: 134.10652

first angle stdev: 30.419592

second angle mean: 157.95013

second angle stdev: 16.359417

172.14 154.42

136.13 177.23

first angle mean: 134.22763

first angle stdev: 30.446623

second angle mean: 157.88063

second angle stdev: 16.37955

170.8 150.67

147.09 177.17

first angle mean: 134.34373

first angle stdev: 30.467798

second angle mean: 157.84637

second angle stdev: 16.364794

168.16 147.8

151.59 178.03

first angle mean: 134.45074

first angle stdev: 30.478785

second angle mean: 157.82658

second angle stdev: 16.342657

166.86 146.01

150.29 178.56

first angle mean: 134.553

first angle stdev: 30.484896

second angle mean: 157.80281

second angle stdev: 16.322332

166.74 144.77

147.32 178.81

first angle mean: 134.6542

first angle stdev: 30.49023

second angle mean: 157.76985

second angle stdev: 16.307213

166.24 147.97

146.46 178.87

first angle mean: 134.75323

first angle stdev: 30.493567

second angle mean: 157.73439

second angle stdev: 16.293903

166.83 150.6

146.97 178.87

first angle mean: 134.85347

first angle stdev: 30.498476

second angle mean: 157.70074

second angle stdev: 16.279516

164.63 154.02

150.16 178.86

first angle mean: 134.94624

first angle stdev: 30.496113

second angle mean: 157.67725

second angle stdev: 16.25957

163.78 155.16

153.59 178.92

first angle mean: 135.03578

first angle stdev: 30.49096

second angle mean: 157.66457

second angle stdev: 16.235895

161.33 153.93

159.22 179.0

first angle mean: 135.11719

first angle stdev: 30.47875

second angle mean: 157.66939

second angle stdev: 16.210974

156.44 151.47

165.72 178.95

first angle mean: 135.18298

first angle stdev: 30.454653

second angle mean: 157.69423

second angle stdev: 16.192097

149.73 148.86

167.9 174.13

first angle mean: 135.22777

first angle stdev: 30.418436

second angle mean: 157.72563

second angle stdev: 16.177042

141.9 144.43

163.6 169.86

first angle mean: 135.24823

first angle stdev: 30.373987

second angle mean: 157.74365

second angle stdev: 16.15548

134.89 136.39

161.51 168.98

first angle mean: 135.24713

first angle stdev: 30.327515

second angle mean: 157.75516

second angle stdev: 16.1321

129.42 129.45

163.97 162.97

first angle mean: 135.22935

first angle stdev: 30.282951

second angle mean: 157.77411

second angle stdev: 16.111134

122.2 122.67

169.72 158.34

first angle mean: 135.18976

first angle stdev: 30.245401

second angle mean: 157.81042

second angle stdev: 16.100063

117.58 119.55

176.58 162.82

first angle mean: 135.1364

first angle stdev: 30.215046

second angle mean: 157.86731

second angle stdev: 16.10872

113.5 118.03

178.63 170.95

first angle mean: 135.07103

first angle stdev: 30.192728

second angle mean: 157.93002

second angle stdev: 16.124681

106.99 102.52

179.11 166.36

first angle mean: 134.98645

first angle stdev: 30.186472

second angle mean: 157.99382

second angle stdev: 16.14216

106.12 92.59

178.4 169.36

first angle mean: 134.89977

first angle stdev: 30.18247

second angle mean: 158.05511

second angle stdev: 16.156534

96.27 82.54

178.53 169.89

first angle mean: 134.7841

first angle stdev: 30.211065

second angle mean: 158.11641

second angle stdev: 16.171068

80.77 79.89

179.82 173.38

first angle mean: 134.62286

first angle stdev: 30.30952

second angle mean: 158.1812

second angle stdev: 16.190268

65.13 81.02

177.24 178.97

first angle mean: 134.41605

first angle stdev: 30.50021

second angle mean: 158.23792

second angle stdev: 16.199457

71.34 82.88

179.17 178.21

first angle mean: 134.22887

first angle stdev: 30.647566

second angle mean: 158.30003

second angle stdev: 16.215427

87.88 86.31

179.32 177.78

first angle mean: 134.09174

first angle stdev: 30.705559

second angle mean: 158.36221

second angle stdev: 16.231619

98.24 90.8

178.8 178.34

first angle mean: 133.986

first angle stdev: 30.721825

second angle mean: 158.4225

second angle stdev: 16.245516

107.86 100.66

178.72 179.76

first angle mean: 133.90915

first angle stdev: 30.709219

second angle mean: 158.48221

second angle stdev: 16.258806

116.98 108.04

178.29 169.89

first angle mean: 133.8595

first angle stdev: 30.67782

second angle mean: 158.54028

second angle stdev: 16.27024

126.27 116.87

171.34 169.85

first angle mean: 133.83731

first angle stdev: 30.635675

second angle mean: 158.57771

second angle stdev: 16.26113

136.25 126.27

172.53 177.17

first angle mean: 133.84435

first angle stdev: 30.59126

second angle mean: 158.6184

second angle stdev: 16.254824

145.68 134.81

171.58 178.67

first angle mean: 133.87875

first angle stdev: 30.553411

second angle mean: 158.65607

second angle stdev: 16.246176

150.13 142.16

166.05 179.17

first angle mean: 133.92584

first angle stdev: 30.521605

second angle mean: 158.6775

second angle stdev: 16.227482

151.44 144.41

156.58 178.54

first angle mean: 133.97647

first angle stdev: 30.491966

second angle mean: 158.67145

second angle stdev: 16.204405

153.65 146.56

149.1 178.5

first angle mean: 134.03316

first angle stdev: 30.466255

second angle mean: 158.64386

second angle stdev: 16.189173

157.25 148.1

148.72 178.75

first angle mean: 134.09988

first angle stdev: 30.447823

second angle mean: 158.61534

second angle stdev: 16.17462

166.83 148.06

128.36 179.45

first angle mean: 134.19366

first angle stdev: 30.454464

second angle mean: 158.52866

second angle stdev: 16.232193

166.13 149.78

133.53 179.32

first angle mean: 134.28491

first angle stdev: 30.458664

second angle mean: 158.45723

second angle stdev: 16.263817

157.23 148.54

149.02 179.09

first angle mean: 134.35028

first angle stdev: 30.439823

second angle mean: 158.43033

second angle stdev: 16.248419

151.91 146.98

158.56 179.0

first angle mean: 134.40016

first angle stdev: 30.410917

second angle mean: 158.43073

second angle stdev: 16.225325

147.34 144.84

167.14 178.99

first angle mean: 134.43683

first angle stdev: 30.375599

second angle mean: 158.45538

second angle stdev: 16.208937

146.02 142.28

169.07 179.08

first angle mean: 134.46954

first angle stdev: 30.338894

second angle mean: 158.48537

second angle stdev: 16.195827

148.89 142.29

165.36 179.14

first angle mean: 134.51016

first angle stdev: 30.30577

second angle mean: 158.50475

second angle stdev: 16.177103

151.46 142.98

165.72 179.14

first angle mean: 134.55779

first angle stdev: 30.27647

second angle mean: 158.52501

second angle stdev: 16.15888

150.38 143.37

167.88 179.16

first angle mean: 134.6021

first angle stdev: 30.245598

second angle mean: 158.55121

second angle stdev: 16.143806

150.44 143.01

166.97 178.99

first angle mean: 134.64635

first angle stdev: 30.21489

second angle mean: 158.57472

second angle stdev: 16.127365

150.48 142.2

164.07 179.02

first angle mean: 134.69044

first angle stdev: 30.184317

second angle mean: 158.59003

second angle stdev: 16.107492

151.15 143.34

164.11 179.09

first angle mean: 134.73616

first angle stdev: 30.154812

second angle mean: 158.60538

second angle stdev: 16.087729

154.86 143.93

163.5 179.15

first angle mean: 134.79192

first angle stdev: 30.131586

second angle mean: 158.61893

second angle stdev: 16.06749

160.74 141.72

156.35 179.06

first angle mean: 134.8636

first angle stdev: 30.120747

second angle mean: 158.61266

second angle stdev: 16.045723

162.09 142.09

148.37 179.05

first angle mean: 134.9386

first angle stdev: 30.11306

second angle mean: 158.58444

second angle stdev: 16.032598

156.48 144.66

142.13 179.23

first angle mean: 134.99777

first angle stdev: 30.092798

second angle mean: 158.53923

second angle stdev: 16.033709

152.77 145.22

141.36 179.19

first angle mean: 135.04646

first angle stdev: 30.0659

second angle mean: 158.49217

second angle stdev: 16.03689

148.19 144.27

146.66 172.53

first angle mean: 135.08238

first angle stdev: 30.032639

second angle mean: 158.45984

second angle stdev: 16.026873

143.75 143.01

158.27 162.32

first angle mean: 135.106

first angle stdev: 29.995096

second angle mean: 158.45932

second angle stdev: 16.005026

141.59 140.86

168.57 158.97

first angle mean: 135.12361

first angle stdev: 29.956217

second angle mean: 158.4868

second angle stdev: 15.991928

138.47 135.68

174.92 166.62

first angle mean: 135.13269

first angle stdev: 29.916103

second angle mean: 158.53134

second angle stdev: 15.993078

134.89 130.04

179.19 168.52

first angle mean: 135.13202

first angle stdev: 29.875652

second angle mean: 158.58716

second angle stdev: 16.007423

129.24 125.67

177.63 166.86

first angle mean: 135.11615

first angle stdev: 29.836924

second angle mean: 158.6385

second angle stdev: 16.016296

121.29 119.8

179.95 161.38

first angle mean: 135.07898

first angle stdev: 29.805393

second angle mean: 158.69579

second angle stdev: 16.032772

113.66 113.13

178.71 159.38

first angle mean: 135.02155

first angle stdev: 29.78601

second angle mean: 158.74945

second angle stdev: 16.044678

78.73 109.67

179.52 159.01

first angle mean: 134.87105

first angle stdev: 29.88786

second angle mean: 158.80498

second angle stdev: 16.059072

67.68 105.76

179.11 159.29

first angle mean: 134.69186

first angle stdev: 30.048445

second angle mean: 158.85913

second angle stdev: 16.071796

63.55 99.08

178.92 158.23

first angle mean: 134.50266

first angle stdev: 30.231316

second angle mean: 158.91249

second angle stdev: 16.083628

66.52 92.34

179.03 164.59

first angle mean: 134.32233

first angle stdev: 30.393002

second angle mean: 158.96584

second angle stdev: 16.095577

76.04 88.32

178.9 170.85

first angle mean: 134.16815

first angle stdev: 30.500057

second angle mean: 159.01859

second angle stdev: 16.106853

82.42 87.96

178.79 175.14

first angle mean: 134.0316

first angle stdev: 30.575249

second angle mean: 159.07074

second angle stdev: 16.117535

88.74 85.32

178.65 177.06

first angle mean: 133.91241

first angle stdev: 30.623028

second angle mean: 159.12227

second angle stdev: 16.127537

86.3 87.15

179.21 176.66

first angle mean: 133.78745

first angle stdev: 30.679682

second angle mean: 159.17499

second angle stdev: 16.139116

85.7 87.29

179.1 175.63

first angle mean: 133.66156

first angle stdev: 30.737865

second angle mean: 159.22716

second angle stdev: 16.150103

86.46 88.13

179.78 174.0

first angle mean: 133.53833

first angle stdev: 30.79207

second angle mean: 159.28082

second angle stdev: 16.163069

89.73 88.01

179.06 172.59

first angle mean: 133.42424

first angle stdev: 30.832893

second angle mean: 159.33232

second angle stdev: 16.173456

94.32 88.33

178.81 171.02

first angle mean: 133.32268

first angle stdev: 30.857082

second angle mean: 159.38292

second angle stdev: 16.182833

robot count: 8103.63

ROBOT: Exercise open\_arms\_above\_head\_ball done

TRAINING: Exercise open\_arms\_above\_head\_ball 89.62 done

178.83 170.81

first angle mean: 133.24574

first angle stdev: 30.854025

second angle mean: 159.43329

second angle stdev: 16.19206

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/open\_arms\_above\_head\_ball/28-06-2024 15-30-28

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/open\_arms\_above\_head\_ball/28-06-2024 15-30-28

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/open\_arms\_above\_head\_ball/28-06-2024 15-30-28

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/open\_arms\_above\_head\_ball/28-06-2024 15-30-28