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\_with\_band start

CAMERA: Exercise open\_arms\_with\_band start

ROBOT: Exercise open\_arms\_with\_band start

81.43 74.17

120.12 89.49

first angle mean: 81.43

first angle stdev: 0.0

second angle mean: 120.12

second angle stdev: 0.0

71.84 111.14

102.5 125.07

first angle mean: 76.634995

first angle stdev: 4.795002

second angle mean: 111.31

second angle stdev: 8.810001

85.37 78.37

110.79 96.07

first angle mean: 79.54666

first angle stdev: 5.6818705

second angle mean: 111.136665

second angle stdev: 7.197511

88.07 82.48

118.89 97.27

first angle mean: 81.6775

first angle stdev: 6.1509423

second angle mean: 113.075

second angle stdev: 7.079868

93.07 85.0

118.45 93.08

first angle mean: 83.956

first angle stdev: 7.143775

second angle mean: 114.15

second angle stdev: 6.6874595

88.07 83.27

111.92 91.37

first angle mean: 84.64167

first angle stdev: 6.6991515

second angle mean: 113.77833

second angle stdev: 6.161097

86.45 81.2

109.99 86.83

first angle mean: 84.9

first angle stdev: 6.2344055

second angle mean: 113.23714

second angle stdev: 5.856083

87.02 81.15

104.41 91.88

first angle mean: 85.16499

first angle stdev: 5.8737473

second angle mean: 112.13374

second angle stdev: 6.207199

88.84 82.49

105.44 93.61

first angle mean: 85.573326

first angle stdev: 5.6569743

second angle mean: 111.38999

second angle stdev: 6.2188096

87.52 80.54

110.24 83.53

first angle mean: 85.76799

first angle stdev: 5.3983593

second angle mean: 111.275

second angle stdev: 5.9097595

91.8 82.29

112.48 78.56

first angle mean: 86.31635

first angle stdev: 5.4313912

second angle mean: 111.384544

second angle stdev: 5.6453733

91.28 83.25

109.35 86.65

first angle mean: 86.72999

first angle stdev: 5.3780785

second angle mean: 111.215

second angle stdev: 5.434205

93.43 85.66

107.73 98.76

first angle mean: 87.24538

first angle stdev: 5.4668345

second angle mean: 110.946915

second angle stdev: 5.30296

94.82 88.59

114.87 111.59

first angle mean: 87.78642

first angle stdev: 5.6175637

second angle mean: 111.227135

second angle stdev: 5.208984

92.12 84.53

118.7 106.35

first angle mean: 88.075325

first angle stdev: 5.5336914

second angle mean: 111.72533

second angle stdev: 5.3665004

88.52 82.59

117.05 98.9

first angle mean: 88.10313

first angle stdev: 5.3590546

second angle mean: 112.05812

second angle stdev: 5.3535614

87.66 82.84

114.46 95.2

first angle mean: 88.077065

first angle stdev: 5.2000923

second angle mean: 112.1994

second angle stdev: 5.224375

96.44 88.91

115.84 94.7

first angle mean: 88.541664

first angle stdev: 5.4044714

second angle mean: 112.40166

second angle stdev: 5.145209

101.99 88.51

118.26 94.97

first angle mean: 89.24947

first angle stdev: 6.057133

second angle mean: 112.709984

second angle stdev: 5.176012

102.54 89.69

122.32 96.9

first angle mean: 89.914

first angle stdev: 6.5760727

second angle mean: 113.19049

second angle stdev: 5.4624414

99.19 87.6

122.25 98.3

first angle mean: 90.35571

first angle stdev: 6.714737

second angle mean: 113.621895

second angle stdev: 5.66918

95.5 87.42

120.37 95.61

first angle mean: 90.58955

first angle stdev: 6.64729

second angle mean: 113.928635

second angle stdev: 5.71441

93.75 87.71

117.21 94.34

first angle mean: 90.72695

first angle stdev: 6.533048

second angle mean: 114.0713

second angle stdev: 5.6287217

92.57 87.47

115.62 92.21

first angle mean: 90.80375

first angle stdev: 6.4060903

second angle mean: 114.135826

second angle stdev: 5.5188932

91.41 86.74

115.44 93.41

first angle mean: 90.827995

first angle stdev: 6.2777853

second angle mean: 114.18799

second angle stdev: 5.4134245

91.04 84.87

116.19 95.54

first angle mean: 90.83615

first angle stdev: 6.1560097

second angle mean: 114.264984

second angle stdev: 5.3222427

91.61 82.76

116.35 95.63

first angle mean: 90.864815

first angle stdev: 6.0427012

second angle mean: 114.34222

second angle stdev: 5.237575

91.52 82.81

116.56 94.71

first angle mean: 90.88822

first angle stdev: 5.9350605

second angle mean: 114.421425

second angle stdev: 5.1596375

88.74 82.86

116.16 92.63

first angle mean: 90.81414

first angle stdev: 5.8449926

second angle mean: 114.48137

second angle stdev: 5.079813

90.82 83.76

117.75 92.42

first angle mean: 90.81434

first angle stdev: 5.7467504

second angle mean: 114.590324

second angle stdev: 5.0287776

93.06 83.91

118.46 93.65

first angle mean: 90.88678

first angle stdev: 5.6672077

second angle mean: 114.71515

second angle stdev: 4.9940267

93.17 83.59

117.33 96.43

first angle mean: 90.95813

first angle stdev: 5.5920835

second angle mean: 114.796875

second angle stdev: 4.9363866

92.8 83.8

116.7 96.94

first angle mean: 91.01395

first angle stdev: 5.515747

second angle mean: 114.854546

second angle stdev: 4.8719525

92.95 83.96

115.24 97.83

first angle mean: 91.070885

first angle stdev: 5.443865

second angle mean: 114.86588

second angle stdev: 4.800213

93.34 86.47

113.56 98.24

first angle mean: 91.13572

first angle stdev: 5.3788323

second angle mean: 114.828575

second angle stdev: 4.736141

95.93 93.47

110.81 97.08

first angle mean: 91.26889

first angle stdev: 5.3618016

second angle mean: 114.71695

second angle stdev: 4.716362

96.64 92.67

105.62 96.66

first angle mean: 91.414055

first angle stdev: 5.3600883

second angle mean: 114.471085

second angle stdev: 4.880475

93.6 88.13

101.63 93.53

first angle mean: 91.47158

first angle stdev: 5.300652

second angle mean: 114.133156

second angle stdev: 5.2361555

92.03 83.4

95.24 90.27

first angle mean: 91.4859

first angle stdev: 5.232998

second angle mean: 113.64873

second angle stdev: 5.9692745

88.64 86.23

91.66 87.0

first angle mean: 91.41475

first angle stdev: 5.1862397

second angle mean: 113.099

second angle stdev: 6.821058

90.13 104.25

89.33 75.37

first angle mean: 91.38341

first angle stdev: 5.1264343

second angle mean: 112.51927

second angle stdev: 7.670436

92.9 104.31

80.54 67.75

first angle mean: 91.41952

first angle stdev: 5.070312

second angle mean: 111.75786

second angle stdev: 9.011346

88.42 86.77

75.91 73.1

first angle mean: 91.349754

first angle stdev: 5.031359

second angle mean: 110.924194

second angle stdev: 10.416631

75.11 74.53

78.94 79.16

first angle mean: 90.980675

first angle stdev: 5.531445

second angle mean: 110.19727

second angle stdev: 11.347311

75.78 79.67

78.05 84.01

first angle mean: 90.64288

first angle stdev: 5.910798

second angle mean: 109.48289

second angle stdev: 12.180117

86.55 88.9

80.22 80.62

first angle mean: 90.5539

first angle stdev: 5.876587

second angle mean: 108.84674

second angle stdev: 12.780494

88.09 90.21

79.13 80.67

first angle mean: 90.50147

first angle stdev: 5.8245955

second angle mean: 108.21447

second angle stdev: 13.351215

86.48 92.96

80.43 76.52

first angle mean: 90.4177

first angle stdev: 5.792153

second angle mean: 107.63562

second angle stdev: 13.794532

93.34 97.16

86.13 75.44

first angle mean: 90.47734

first angle stdev: 5.7476153

second angle mean: 107.196724

second angle stdev: 13.987553

103.27 97.22

100.73 76.52

first angle mean: 90.73319

first angle stdev: 5.9650617

second angle mean: 107.06739

second angle stdev: 13.876535

106.47 98.08

106.9 80.46

first angle mean: 91.04176

first angle stdev: 6.296418

second angle mean: 107.06411

second angle stdev: 13.739838

105.63 93.85

100.54 83.02

first angle mean: 91.3223

first angle stdev: 6.549535

second angle mean: 106.938644

second angle stdev: 13.636549

85.99 82.1

101.29 83.47

first angle mean: 91.221695

first angle stdev: 6.5278935

second angle mean: 106.83207

second angle stdev: 13.529138

82.09 86.12

98.76 81.97

first angle mean: 91.05259

first angle stdev: 6.5833035

second angle mean: 106.68258

second angle stdev: 13.447389

71.35 77.85

96.56 81.2

first angle mean: 90.69436

first angle stdev: 7.034316

second angle mean: 106.498535

second angle stdev: 13.393042

69.36 74.63

101.83 83.27

first angle mean: 90.31339

first angle stdev: 7.5220094

second angle mean: 106.41518

second angle stdev: 13.287314

82.09 82.37

108.2 88.31

first angle mean: 90.16911

first angle stdev: 7.533496

second angle mean: 106.446495

second angle stdev: 13.172328

101.46 106.0

107.7 94.12

first angle mean: 90.363785

first angle stdev: 7.611514

second angle mean: 106.46811

second angle stdev: 13.0592985

114.33 137.23

110.27 99.44

first angle mean: 90.77

first angle stdev: 8.15619

second angle mean: 106.53255

second angle stdev: 12.957451

104.64 139.84

100.82 93.41

first angle mean: 91.00117

first angle stdev: 8.280553

second angle mean: 106.43734

second angle stdev: 12.869814

91.02 117.62

93.56 86.21

first angle mean: 91.00147

first angle stdev: 8.2123995

second angle mean: 106.226234

second angle stdev: 12.868204

87.34 115.23

90.13 80.08

first angle mean: 90.94241

first angle stdev: 8.158949

second angle mean: 105.96661

second angle stdev: 12.924061

75.76 87.13

83.99 77.06

first angle mean: 90.70142

first angle stdev: 8.313396

second angle mean: 105.61778

second angle stdev: 13.112001

74.66 79.79

77.18 87.92

first angle mean: 90.450775

first angle stdev: 8.484727

second angle mean: 105.17344

second angle stdev: 13.478756

87.47 94.89

91.13 88.52

first angle mean: 90.40492

first angle stdev: 8.427196

second angle mean: 104.95738

second angle stdev: 13.485891

87.07 90.68

99.98 92.08

first angle mean: 90.354385

first angle stdev: 8.373026

second angle mean: 104.881966

second angle stdev: 13.39714

70.4 77.23

86.98 94.72

first angle mean: 90.05656

first angle stdev: 8.655371

second angle mean: 104.61478

second angle stdev: 13.472802

67.82 84.77

68.89 92.88

first angle mean: 89.72955

first angle stdev: 8.998796

second angle mean: 104.08942

second angle stdev: 14.04776

81.49 89.93

72.22 78.29

first angle mean: 89.61014

first angle stdev: 8.987457

second angle mean: 103.62754

second angle stdev: 14.456346

87.33 99.4

77.52 78.47

first angle mean: 89.57757

first angle stdev: 8.927133

second angle mean: 103.25458

second angle stdev: 14.683272

86.13 106.61

80.96 80.84

first angle mean: 89.52901

first angle stdev: 8.873347

second angle mean: 102.94057

second angle stdev: 14.814317

87.54 111.34

83.84 83.53

first angle mean: 89.50138

first angle stdev: 8.814586

second angle mean: 102.67528

second angle stdev: 14.879939

86.41 107.23

87.31 85.45

first angle mean: 89.45904

first angle stdev: 8.761375

second angle mean: 102.4648

second angle stdev: 14.885207

83.77 90.62

89.27 86.46

first angle mean: 89.38216

first angle stdev: 8.72673

second angle mean: 102.28649

second angle stdev: 14.862576

85.26 83.35

80.92 87.6

first angle mean: 89.327194

first angle stdev: 8.681242

second angle mean: 102.0016

second angle stdev: 14.965184

88.04 82.86

79.15 86.54

first angle mean: 89.31026

first angle stdev: 8.625188

second angle mean: 101.70092

second angle stdev: 15.0927305

89.25 84.15

82.55 87.64

first angle mean: 89.30948

first angle stdev: 8.568999

second angle mean: 101.4522

second angle stdev: 15.150362

89.07 85.28

91.72 87.54

first angle mean: 89.306404

first angle stdev: 8.513935

second angle mean: 101.32744

second angle stdev: 15.092694

89.57 88.76

103.48 90.69

first angle mean: 89.30974

first angle stdev: 8.459929

second angle mean: 101.35468

second angle stdev: 14.998797

92.87 91.96

107.75 91.23

first angle mean: 89.35425

first angle stdev: 8.416188

second angle mean: 101.43463

second angle stdev: 14.921687

86.68robot count: 1

90.17

99.72 87.41

first angle mean: 89.321236

first angle stdev: 8.369287

second angle mean: 101.41346

second angle stdev: 14.830501

84.61 82.86

96.6 83.55

first angle mean: 89.26378

first angle stdev: 8.334154

second angle mean: 101.35475

second angle stdev: 14.749258

91.52 85.51

107.39 81.51

first angle mean: 89.29096

first angle stdev: 8.287453

second angle mean: 101.42747

second angle stdev: 14.674918

93.23 87.98

116.87 88.12

first angle mean: 89.33785

first angle stdev: 8.249045

second angle mean: 101.611305

second angle stdev: 14.68314

92.48 85.17

122.87 97.11

first angle mean: 89.374825

first angle stdev: 8.207375

second angle mean: 101.86141

second angle stdev: 14.775402

91.95 83.33

125.22 103.17

first angle mean: 89.40477

first angle stdev: 8.164186

second angle mean: 102.13302

second angle stdev: 14.901164

95.91 91.72

140.59 108.06

first angle mean: 89.479546

first angle stdev: 8.146694

second angle mean: 102.57505

second angle stdev: 15.371934

99.13 103.98

152.35 121.07

first angle mean: 89.5892

first angle stdev: 8.164601

second angle mean: 103.14069

second angle stdev: 16.169266

100.47 105.56

158.45 131.3

first angle mean: 89.711464

first angle stdev: 8.199208

second angle mean: 103.762146

second angle stdev: 17.102442

counter:1

104.09 95.08

160.34 133.85

first angle mean: 89.87122

first angle stdev: 8.291662

second angle mean: 104.390785

second angle stdev: 18.011543

107.57 94.3

163.64 137.22

first angle mean: 90.06572

first angle stdev: 8.449887

second angle mean: 105.04188

second angle stdev: 18.947384

107.63 94.57

164.27 139.4

first angle mean: 90.25664

first angle stdev: 8.598916

second angle mean: 105.68565

second angle stdev: 19.819607

105.69 97.05

163.59 144.4

first angle mean: 90.42259

first angle stdev: 8.699421

second angle mean: 106.30828

second angle stdev: 20.597527

104.98 98.8

163.16 148.09

first angle mean: 90.57746

first angle stdev: 8.780961

second angle mean: 106.913086

second angle stdev: 21.301718

104.5 98.02

161.95 146.92

first angle mean: 90.724014

first angle stdev: 8.849439

second angle mean: 107.492424

second angle stdev: 21.921131

104.65 96.39

160.36 141.88

first angle mean: 90.86906

first angle stdev: 8.916048

second angle mean: 108.04312

second angle stdev: 22.457548

102.8 92.96

159.01 128.37

first angle mean: 90.99206

first angle stdev: 8.951466

second angle mean: 108.56855

second angle stdev: 22.926964

101.25 91.41

156.29 116.29

first angle mean: 91.09673

first angle stdev: 8.965147

second angle mean: 109.055504

second angle stdev: 23.30843

96.87 92.8

148.68 109.77

first angle mean: 91.155045

first angle stdev: 8.938416

second angle mean: 109.45575

second angle stdev: 23.526464

95.28 92.87

126.81 101.98

first angle mean: 91.1963

first angle stdev: 8.903077

second angle mean: 109.62929

second angle stdev: 23.472136

94.93 102.99

120.55 96.38

first angle mean: 91.23326

first angle stdev: 8.866602

second angle mean: 109.73741

second angle stdev: 23.380665

97.44 112.41

109.18 96.99

first angle mean: 91.29412

first angle stdev: 8.844199

second angle mean: 109.73194

second angle stdev: 23.265837

105.75 108.57

103.02 89.71

first angle mean: 91.43446

first angle stdev: 8.914573

second angle mean: 109.66677

second angle stdev: 23.161972

109.14 110.34

100.76 85.53

first angle mean: 91.60472

first angle stdev: 9.038296

second angle mean: 109.58116

second angle stdev: 23.066729

117.84 116.75

94.72 80.45

first angle mean: 91.854576

first angle stdev: 9.349091

second angle mean: 109.43962

second angle stdev: 23.001955

127.28 125.75

89.35 75.82

first angle mean: 92.18878

first angle stdev: 9.915063

second angle mean: 109.25009

second angle stdev: 22.975424

123.25 121.65

85.87 70.73

first angle mean: 92.47907

first angle stdev: 10.311268

second angle mean: 109.031586

second angle stdev: 22.978199

123.47 121.62

86.1 67.16

first angle mean: 92.76602

first angle stdev: 10.684025

second angle mean: 108.81925

second angle stdev: 22.976788

122.34 121.07

88.1 64.97

first angle mean: 93.037346

first angle stdev: 11.002345

second angle mean: 108.629166

second angle stdev: 22.956299

125.09 123.81

87.73 65.62

first angle mean: 93.32873

first angle stdev: 11.36688

second angle mean: 108.43918

second angle stdev: 22.937641

129.28 125.86

90.34 66.61

first angle mean: 93.65262

first angle stdev: 11.8144455

second angle mean: 108.27612

second angle stdev: 22.898035

126.79 122.92

94.28 68.28

first angle mean: 93.94849

first angle stdev: 12.167649

second angle mean: 108.15116

second angle stdev: 22.83357

118.33 113.57

97.67 75.24

first angle mean: 94.16425

first angle stdev: 12.327027

second angle mean: 108.0584

second angle stdev: 22.753496

106.11 97.55

102.81 88.75

first angle mean: 94.26904

first angle stdev: 12.32329

second angle mean: 108.01236

second angle stdev: 22.658768

99.11 92.84

112.47 101.35

first angle mean: 94.31114

first angle stdev: 12.2778225

second angle mean: 108.051125

second angle stdev: 22.563831

103.49 102.46

132.31 110.06

first angle mean: 94.390274

first angle stdev: 12.2542

second angle mean: 108.26025

second angle stdev: 22.578018

102.36 104.06

136.94 113.72

first angle mean: 94.45839

first angle stdev: 12.223757

second angle mean: 108.50538

second angle stdev: 22.635815

99.28 110.1

131.5 123.13

first angle mean: 94.49925

first angle stdev: 12.1798725

second angle mean: 108.70025

second angle stdev: 22.638039

94.11 115.72

128.52 132.01

first angle mean: 94.49599

first angle stdev: 12.12864

second angle mean: 108.86679

second angle stdev: 22.615206

93.32 115.82

134.83 135.75

first angle mean: 94.48617

first angle stdev: 12.078472

second angle mean: 109.08316

second angle stdev: 22.644117

93.27 112.11

141.02 136.64

first angle mean: 94.47611

first angle stdev: 12.028961

second angle mean: 109.3471

second angle stdev: 22.734955

94.02 109.15

147.99 139.81

first angle mean: 94.47237

first angle stdev: 11.979632

second angle mean: 109.66385

second angle stdev: 22.9081

98.3 102.73

155.43 141.08

first angle mean: 94.50349

first angle stdev: 11.935784

second angle mean: 110.03593

second angle stdev: 23.181993

102.53 96.47

160.33 139.1

first angle mean: 94.568214

first angle stdev: 11.909216

second angle mean: 110.44152

second angle stdev: 23.522448

104.57 93.06

165.43 134.45

first angle mean: 94.64823

first angle stdev: 11.894901

second angle mean: 110.88143

second angle stdev: 23.934818

106.99 98.84

167.24 145.18

first angle mean: 94.746185

first angle stdev: 11.89811

second angle mean: 111.32872

second angle stdev: 24.358519

103.68 97.9

164.39 141.76

first angle mean: 94.81653

first angle stdev: 11.877452

second angle mean: 111.74652

second angle stdev: 24.711538

100.44 97.56

162.22 140.98

first angle mean: 94.86047

first angle stdev: robot count: 2

11.841319

second angle mean: 112.140854

second angle stdev: 25.012733

99.06 99.15

160.77 144.21

first angle mean: 94.89302

first angle stdev: 11.801082

second angle mean: 112.51783

second angle stdev: 25.277987

98.25 100.86

159.85 148.04

first angle mean: 94.91884

first angle stdev: 11.759264

second angle mean: 112.88193

second angle stdev: 25.517878

97.29 100.72

159.79 151.4

first angle mean: 94.93695

first angle stdev: 11.716112

second angle mean: 113.24

second angle stdev: 25.746065

101.77 104.05

166.75 169.77

first angle mean: 94.98871

first angle stdev: 11.686677

second angle mean: 113.64538

second angle stdev: 26.064646

102.86 107.91

167.06 169.66

first angle mean: 95.04789

first angle stdev: 11.662498

second angle mean: 114.04699

second angle stdev: 26.373253

104.55 105.1

162.41 164.7

first angle mean: 95.118805

first angle stdev: 11.647644

second angle mean: 114.40791

second angle stdev: 26.602306

105.89 102.85

156.32 153.8

first angle mean: 95.19859

first angle stdev: 11.641122

second angle mean: 114.718376

second angle stdev: 26.746143

106.63 106.41

155.55 148.43

first angle mean: 95.282646

first angle stdev: 11.639289

second angle mean: 115.0186

second angle stdev: 26.87499

108.59 113.87

154.45 140.67

first angle mean: 95.379776

first angle stdev: 11.651925

second angle mean: 115.30643

second angle stdev: 26.98628

111.64 123.13

149.75 135.45

first angle mean: 95.497604

first angle stdev: 11.691259

second angle mean: 115.556015

second angle stdev: 27.046564

115.35 127.61

143.69 128.58

first angle mean: 95.64043

first angle stdev: 11.769332

second angle mean: 115.758415

second angle stdev: 27.053785

122.09 129.99

135.53 121.19

first angle mean: 95.82935

first angle stdev: 11.936879

second angle mean: 115.89965

second angle stdev: 27.008366

133.53 150.44

126.78 114.07

first angle mean: 96.096725

first angle stdev: 12.308024

second angle mean: 115.976814

second angle stdev: 26.927904

150.93 166.19

121.45 109.13

first angle mean: 96.48288

first angle stdev: 13.093715

second angle mean: 116.015366

second angle stdev: 26.83682

155.41 170.21

119.85 105.02

first angle mean: 96.89496

first angle stdev: 13.941276

second angle mean: 116.042175

second angle stdev: 26.744732

155.94 171.37

117.28 103.37

first angle mean: 97.305

first angle stdev: 14.73268

second angle mean: 116.050766

second angle stdev: 26.651903

151.49 170.55

114.25 104.05

first angle mean: 97.67869

first angle stdev: 15.351341

second angle mean: 116.038345

second angle stdev: 26.560259

144.25 169.16

109.34 103.37

first angle mean: 97.99767

first angle stdev: 15.773497

second angle mean: 115.99247

second angle stdev: 26.474909

165.03 163.49

105.4 98.26

first angle mean: 98.45367

first angle stdev: 16.65742

second angle mean: 115.92041

second angle stdev: 26.399067

173.56 165.74

99.53 95.06

first angle mean: 98.96115

first angle stdev: 17.704573

second angle mean: 115.80968

second angle stdev: 26.34397

162.6 165.49

101.44 93.42

first angle mean: 99.38825

first angle stdev: 18.394194

second angle mean: 115.713234

second angle stdev: 26.28162

159.82 169.92

109.35 98.25

first angle mean: 99.79113

first angle stdev: 18.980911

second angle mean: 115.67081

second angle stdev: 26.198986

152.22 160.83

121.83 113.3

first angle mean: 100.13834

first angle stdev: 19.390009

second angle mean: 115.71159

second angle stdev: 26.116867

137.25 144.57

134.07 127.79

first angle mean: 100.3825

first angle stdev: 19.557615

second angle mean: 115.83237

second angle stdev: 26.073092

121.23 125.99

145.07 136.02

first angle mean: 100.51876

first angle stdev: 19.565847

second angle mean: 116.02346

second angle stdev: 26.09432

118.4 118.94

148.16 137.21

first angle mean: 100.63487

first angle stdev: 19.55503

second angle mean: 116.23214

second angle stdev: 26.137228

107.69 112.39

151.59 138.08

first angle mean: 100.68039

first angle stdev: 19.50003

second angle mean: 116.46026

second angle stdev: 26.206123

102.69 113.71

154.27 139.8

first angle mean: 100.693275

first angle stdev: 19.438093

second angle mean: 116.70262

second angle stdev: 26.295698

100.72 111.23

156.77 144.21

first angle mean: 100.69344

first angle stdev: 19.37609

second angle mean: 116.957825

second angle stdev: 26.404922

99.31 108.09

157.78 146.96

first angle mean: 100.684685

first angle stdev: 19.314987

second angle mean: 117.2162

second angle stdev: 26.519567

98.92 103.08

155.39 149.8

first angle mean: 100.67359

first angle stdev: 19.254658

second angle mean: 117.45629

second angle stdev: 26.607737

101.56 99.84

154.5 151.46

first angle mean: 100.67912

first angle stdev: 19.194519

second angle mean: 117.68782

second angle stdev: 26.684633

104.13 101.47

158.17 159.02

first angle mean: 100.70056

first angle stdev: 19.136738

second angle mean: 117.93926

second angle stdev: 26.791092

103.42 108.4

160.3 167.99

first angle mean: 100.71735

first angle stdev: 19.07877

second angle mean: 118.20074

second angle stdev: 26.913572

104.33 108.97

161.79 166.26

first angle mean: 100.7395

first angle stdev: 19.02225

second angle mean: 118.46816

second angle stdev: 27.045918

104.44 107.0

161.53 161.49

first angle mean: 100.76208

first angle stdev: 18.966354

second angle mean: 118.73073

second angle stdev: 27.170927

104.4 104.83

161.57 160.41

first angle mean: 100.78413

first angle stdev: 18.9109

second angle mean: 118.990364

second angle stdev: 27.291756

103.69 103.87

159.75 161.07

first angle mean: 100.80163

first angle stdev: 18.855194

second angle mean: 119.2359

second angle stdev: 27.39162

102.15 104.37

157.94 162.11

first angle mean: 100.809715

first angle stdev: 18.798944

second angle mean: 119.467674

second angle stdev: 27.47225

104.46 108.15

163.76 168.82

first angle mean: 100.83143

first angle stdev: 18.745016

second angle mean: 119.73131

second angle stdev: 27.601448

106.15 108.54

166.51 169.4

first angle mean: 100.8629

first angle stdev: 18.693926

second angle mean: 120.00811

second angle stdev: 27.75254

107.29 108.49

167.5 168.48

first angle mean: 100.90071

first angle stdev: 18.645342

second angle mean: 120.287476

second angle stdev: 27.908108

107.46 109.16

168.02 168.71

first angle mean: 100.939064

first angle stdev: 18.59747

second angle mean: 120.56661

second angle stdev: 28.063387

107.53 108.89

165.25 167.9

first angle mean: 100.97738

first angle stdev: 18.550097

second angle mean: 120.8264

second angle stdev: 28.187153

106.66 106.66

159.94 162.28

first angle mean: 101.01023

first angle stdev: 18.501421

second angle mean: 121.05248

second angle stdev: 28.261549

108.38 103.77

155.49 153.15

first angle mean: 101.05259

first angle stdev: 18.456589

second angle mean: 121.250404

second angle stdev: 28.300201

109.96 104.18

152.12 148.07

first angle mean: 101.103485

first angle stdev: 18.416025

second angle mean: 121.42681

second angle stdev: 28.314999

111.64 112.26

148.86 143.17

first angle mean: 101.16335

first angle stdev: 18.3807

second angle mean: 121.58267

second angle stdev: 28.309635

robot count: 3114.25

121.52

144.51 136.78

first angle mean: 101.23729

first angle stdev: 18.35493

second angle mean: 121.712204

second angle stdev: 28.281809

121.07 128.98

141.17 131.04

first angle mean: 101.34871

first angle stdev: 18.363228

second angle mean: 121.82152

second angle stdev: 28.239725

133.29 133.39

132.89 125.85

first angle mean: 101.52716

first angle stdev: 18.465973

second angle mean: 121.88336

second angle stdev: 28.172815

140.32 153.6

125.4 116.06

first angle mean: 101.742676

first angle stdev: 18.638985

second angle mean: 121.902885

second angle stdev: 28.095663

158.63 167.56

113.12 105.17

first angle mean: 102.05696

first angle stdev: 19.059723

second angle mean: 121.85437

second angle stdev: 28.025507

161.27 168.5

106.95 97.58

first angle mean: 102.38231

first angle stdev: 19.504766

second angle mean: 121.77247

second angle stdev: 27.970114

131.23 137.55

96.88 84.94

first angle mean: 102.53995

first angle stdev: 19.56731

second angle mean: 121.63645

second angle stdev: 27.953888

113.69 116.14

86.71 84.48

first angle mean: 102.60054

first angle stdev: 19.531277

second angle mean: 121.44663

second angle stdev: 27.99583

119.2 122.39

84.01 89.46

first angle mean: 102.69028

first angle stdev: 19.516407

second angle mean: 121.24428

second angle stdev: 28.054674

123.23 126.72

85.34 92.42

first angle mean: 102.800705

first angle stdev: 19.52174

second angle mean: 121.05125

second angle stdev: 28.102076

139.89 149.66

102.03 99.49

first angle mean: 102.99904

first angle stdev: 19.65648

second angle mean: 120.949524

second angle stdev: 28.061148

149.18 153.11

123.98 120.53

first angle mean: 103.24468

first angle stdev: 19.88984

second angle mean: 120.965645

second angle stdev: 27.987286

130.84 128.92

136.99 135.79

first angle mean: 103.390686

first angle stdev: 19.937914

second angle mean: 121.05043

second angle stdev: 27.937344

116.39 124.56

143.1 134.98

first angle mean: 103.45911

first angle stdev: 19.907608

second angle mean: 121.16648

second angle stdev: 27.909365

115.65 118.01

145.44 137.13

first angle mean: 103.522934

first angle stdev: 19.874907

second angle mean: 121.293564

second angle stdev: 27.891273

117.05 107.59

147.45 144.31

first angle mean: 103.59338

first angle stdev: 19.846981

second angle mean: 121.42979

second angle stdev: 27.882187

113.7 104.75

151.28 144.59

first angle mean: 103.645744

first angle stdev: 19.808792

second angle mean: 121.58446

second angle stdev: 27.892313

101.87 107.05

154.27 143.08

first angle mean: 103.6366

first angle stdev: 19.758081

second angle mean: 121.75294

second angle stdev: 27.918621

97.18 105.1

155.12 143.25

first angle mean: 103.603485

first angle stdev: 19.71275

second angle mean: 121.92405

second angle stdev: 27.948748

101.47 105.08

162.3 148.58

first angle mean: 103.59259

first angle stdev: 19.662985

second angle mean: 122.13004

second angle stdev: 28.025383

103.04 104.42

165.58 153.08

first angle mean: 103.5898

first angle stdev: 19.613054

second angle mean: 122.35061

second angle stdev: 28.124186

105.15 101.12

164.06 155.07

first angle mean: 103.59768

first angle stdev: 19.563778

second angle mean: 122.56126

second angle stdev: 28.208454

106.06 99.89

163.65 158.66

first angle mean: 103.61004

first angle stdev: 19.515337

second angle mean: 122.76774

second angle stdev: 28.28709

104.82 100.02

162.57 163.89

first angle mean: 103.6161

first angle stdev: 19.466675

second angle mean: 122.96675

second angle stdev: 28.355602

102.94 101.74

161.1 169.94

first angle mean: 103.61274

first angle stdev: 19.418247

second angle mean: 123.15646

second angle stdev: 28.411943

101.6 101.81

160.46 169.63

first angle mean: 103.60277

first angle stdev: 19.370638

second angle mean: 123.34114

second angle stdev: 28.462204

100.2 103.41

160.44 170.19

first angle mean: 103.58601

first angle stdev: 19.324337

second angle mean: 123.52389

second angle stdev: 28.510576

98.61 105.62

160.75 170.62

first angle mean: 103.56162

first angle stdev: 19.280048

second angle mean: 123.70637

second angle stdev: 28.559206

99.01 106.04

162.26 169.11

first angle mean: 103.53941

first angle stdev: 19.23558

second angle mean: 123.89444

second angle stdev: 28.615814

101.52 104.56

165.41 166.41

first angle mean: 103.52961

first angle stdev: 19.189348

second angle mean: 124.09597

second angle stdev: 28.691738

102.52 102.86

165.64 163.99

first angle mean: 103.52473

first angle stdev: 19.14307

second angle mean: 124.29667

second angle stdev: 28.766932

104.75 101.55

166.77 160.67

first angle mean: 103.53063

first angle stdev: 19.097185

second angle mean: 124.50086

second angle stdev: 28.847689

105.93 101.58

159.58 156.6

first angle mean: 103.54211

first angle stdev: 19.052162

second angle mean: 124.66871

second angle stdev: 28.880217

105.59 101.92

153.5 150.27

first angle mean: 103.55186

first angle stdev: 19.007269

second angle mean: 124.806

second angle stdev: 28.879658

106.39 102.76

148.68 145.37

first angle mean: 103.565315

first angle stdev: 18.963177

second angle mean: 124.91914

second angle stdev: 28.857761

108.89 105.88

144.65 141.75

first angle mean: 103.59042

first angle stdev: 18.921917

second angle mean: 125.012215

second angle stdev: 28.821342

110.66 112.57

145.48 139.13

first angle mean: 103.62362

first angle stdev: 18.88363

second angle mean: 125.108315

second angle stdev: 28.787628

113.11 117.35

147.8 135.52

first angle mean: 103.66795

first angle stdev: 18.850563

second angle mean: 125.21435

second angle stdev: 28.761951

113.59 123.14

148.97 136.19

first angle mean: 103.714096

first angle stdev: 18.818787

second angle mean: 125.32484

second angle stdev: 28.740475

112.35 128.35

145.74 134.62

first angle mean: 103.75408

first angle stdev: 18.784325

second angle mean: 125.41935

second angle stdev: 28.70734

116.33 132.76

139.7 126.58

first angle mean: 103.812035

first angle stdev: 18.76034

second angle mean: 125.48517

second angle stdev: 28.657442

118.22 136.14

137.02 120.68

first angle mean: 103.87812

first angle stdev: 18.742565

second angle mean: 125.53808

second angle stdev: 28.60226

111.37 152.81

138.26 117.93

first angle mean: 103.91233

first angle stdev: 18.706543

second angle mean: 125.59616

second angle stdev: 28.549772

105.75 154.68

120.53 118.74

first angle mean: 103.920685

first angle stdev: 18.66439

second angle mean: 125.573135

second angle stdev: 28.486849

104.02 155.21

112.28 116.76

first angle mean: 103.921135

first angle stdev: 18.622116

second angle mean: 125.51299

second angle stdev: 28.436325

107.36 163.85

107.56 111.5

first angle mean: 103.93662

first angle stdev: 18.581554

second angle mean: 125.43211

second angle stdev: 28.397667

106.81 149.51

104.48 106.6

first angle mean: 103.94951

first angle stdev: 18.54084

second angle mean: 125.338165

second angle stdev: 28.368486

108.03 136.95

99.92 102.26

first angle mean: 103.96772

first angle stdev: 18.501408

second angle mean: 125.224686

second angle stdev: 28.35577

115.18 139.03

90.5 97.19

first angle mean: 104.017555

first angle stdev: 18.475307

second angle mean: 125.07036

second angle stdev: 28.386818

robot count: 4

121.49 107.58

83.12 87.05

first angle mean: 104.09487

first angle stdev: 18.470827

second angle mean: 124.88473

second angle stdev: 28.460468

121.3 96.8

82.35 83.9

first angle mean: 104.17066

first angle stdev: 18.465286

second angle mean: 124.69736

second angle stdev: 28.53708

124.47 95.06

81.15 86.85

first angle mean: 104.2597

first angle stdev: 18.473513

second angle mean: 124.506355

second angle stdev: 28.619469

107.96 116.1

92.37 91.54

first angle mean: 104.27585

first angle stdev: 18.43475

second angle mean: 124.36603

second angle stdev: 28.635422

102.7 161.89

105.3 110.8

first angle mean: 104.269005

first angle stdev: 18.394922

second angle mean: 124.283134

second angle stdev: 28.600628

97.44 147.02

115.53 125.15

first angle mean: 104.23944

first angle stdev: 18.360538

second angle mean: 124.24524

second angle stdev: 28.54444

98.76 103.64

122.3 133.57

first angle mean: 104.21582

first angle stdev: 18.324442

second angle mean: 124.23685

second angle stdev: 28.48314

97.54 86.22

125.68 116.29

first angle mean: 104.187164

first angle stdev: 18.290283

second angle mean: 124.24304

second angle stdev: 28.42211

91.01 84.01

126.66 113.14

first angle mean: 104.13086

first angle stdev: 18.271389

second angle mean: 124.25337

second angle stdev: 28.361752

86.81 83.57

127.92 108.09

first angle mean: 104.057144

first angle stdev: 18.267302

second angle mean: 124.268974

second angle stdev: 28.30235

89.47 108.82

140.45 130.51

first angle mean: 103.99533

first angle stdev: 18.253168

second angle mean: 124.33753

second angle stdev: 28.261875

92.69 109.33

147.19 139.04

first angle mean: 103.94764

first angle stdev: 18.229355

second angle mean: 124.43396

second angle stdev: 28.241062

94.62 99.55

151.44 138.93

first angle mean: 103.90845

first angle stdev: 18.20102

second angle mean: 124.547424

second angle stdev: 28.235758

103.53 93.78

164.64 141.52

first angle mean: 103.90686

first angle stdev: 18.162918

second angle mean: 124.71518

second angle stdev: 28.295223

107.84 91.51

163.85 144.17

first angle mean: 103.92325

first angle stdev: 18.12681

second angle mean: 124.87826

second angle stdev: 28.34852

103.29 91.94

161.77 146.02

first angle mean: 103.92062

first angle stdev: 18.08921

second angle mean: 125.031334

second angle stdev: 28.388868

100.82 96.91

160.63 154.17

first angle mean: 103.907814

first angle stdev: 18.052893

second angle mean: 125.17843

second angle stdev: 28.422043

99.08 102.21

159.61 163.71

first angle mean: 103.88794

first angle stdev: 18.01836

second angle mean: 125.32012

second angle stdev: 28.449022

100.04 102.56

159.22 165.52

first angle mean: 103.87218

first angle stdev: 17.98308

second angle mean: 125.45906

second angle stdev: 28.473152

100.3 98.9

158.81 159.35

first angle mean: 103.85759

first angle stdev: 17.947786

second angle mean: 125.595184

second angle stdev: 28.494434

102.65 97.67

159.75 157.67

first angle mean: 103.85269

first angle stdev: 17.911434

second angle mean: 125.734024

second angle stdev: 28.51938

103.44 98.08

160.1 153.83

first angle mean: 103.85101

first angle stdev: 17.87516

second angle mean: 125.87317

second angle stdev: 28.545126

104.8 99.94

160.22 150.96

first angle mean: 103.854836

first angle stdev: 17.839186

second angle mean: 126.01166

second angle stdev: 28.570549

105.68 98.69

157.27 137.4

first angle mean: 103.86217

first angle stdev: 17.803703

second angle mean: 126.13719

second angle stdev: 28.581573

104.73 99.7

155.96 126.69

first angle mean: 103.86564

first angle stdev: 17.768143

second angle mean: 126.25647

second angle stdev: 28.586397

99.61 97.58

148.96 116.81

first angle mean: 103.84869

first angle stdev: 17.73474

second angle mean: 126.346924

second angle stdev: 28.56522

98.57 92.2

135.48 103.95

first angle mean: 103.827736

first angle stdev: 17.70263

second angle mean: 126.38317

second angle stdev: 28.514269

94.76 86.26

126.56 93.56

first angle mean: 103.79189

first angle stdev: 17.676767

second angle mean: 126.383865

second angle stdev: 28.457863

93.94 91.02

122.11 84.65

first angle mean: 103.753105

first angle stdev: 17.652718

second angle mean: 126.36705

second angle stdev: 28.40305

99.15 91.37

114.83 76.31

first angle mean: 103.735054

first angle stdev: 17.62042

second angle mean: 126.3218

second angle stdev: 28.356472

99.48 92.48

104.64 76.26

first angle mean: 103.71844

first angle stdev: 17.587976

second angle mean: 126.2371

second angle stdev: 28.33333

96.54 88.93

95.32 87.21

first angle mean: 103.690506

first angle stdev: 17.559412

second angle mean: 126.116806

second angle stdev: 28.343586

95.33 87.22

90.6 84.91

first angle mean: 103.658104

first angle stdev: 17.533047

second angle mean: 125.97914

second angle stdev: 28.374556

89.92 85.2

83.31 87.26

first angle mean: 103.605064

first angle stdev: 17.519896

second angle mean: 125.81439

second angle stdev: 28.443089

82.16 80.83

75.39 82.53

first angle mean: 103.52258

first angle stdev: 17.536482

second angle mean: 125.62045

second angle stdev: 28.5594

80.01 80.41

72.19 80.67

first angle mean: 103.432495

first angle stdev: 17.563028

second angle mean: 125.41575

second angle stdev: 28.69513

101.29 104.61

75.76 77.65

first angle mean: 103.42432

first angle stdev: 17.529978

second angle mean: 125.226204

second angle stdev: 28.80352

131.54 127.0

85.78 70.41

first angle mean: 103.53122

first angle stdev: 17.581976

second angle mean: 125.076225

second angle stdev: 28.851034

133.87 126.12

91.31 69.85

first angle mean: 103.64614

first angle stdev: 17.64733

second angle mean: 124.94833

second angle stdev: 28.870947

121.62 117.98

101.24 70.31

first angle mean: 103.71397

first angle stdev: 17.648443

second angle mean: 124.85887

second angle stdev: 28.853062

108.71 117.24

112.67 98.1

first angle mean: 103.73274

first angle stdev: 17.617891

second angle mean: 124.81304

second angle stdev: 28.808435

102.62 118.94

120.37 124.37

first angle mean: 103.728584

first angle stdev: 17.585

second angle mean: 124.79641

second angle stdev: 28.755718

96.76 113.41

125.59 125.99

first angle mean: 103.702576

first angle stdev: 17.557302

second angle mean: 124.799355

second angle stdev: 28.702059

97.48 100.67

128.58 121.54

first angle mean: 103.67945

first angle stdev: 17.528728

second angle mean: 124.81343

second angle stdev: 28.649584

95.56 107.75

135.01 133.29

first angle mean: 103.649376

first angle stdev: 17.50319

second angle mean: 124.85119

second angle stdev: 28.603188

counter:2

96.5 92.19

148.54 126.04

first angle mean: 103.62299

first angle stdev: 17.476242

second angle mean: 124.9386

second angle stdev: 28.586472

98.87 90.18

152.75 126.05

first angle mean: 103.605515

first angle stdev: 17.446459

second angle mean: 125.04084

second angle stdev: 28.583477

robot count: 5

99.57 92.21

154.32 129.42

first angle mean: 103.59073

first angle stdev: 17.416183

second angle mean: 125.148094

second angle stdev: 28.585855

99.77 95.02

154.56 133.89

first angle mean: 103.57678

first angle stdev: 17.385899

second angle mean: 125.25545

second angle stdev: 28.588715

99.38 96.34

154.97 137.84

first angle mean: 103.56152

first angle stdev: 17.356098

second angle mean: 125.363495

second angle stdev: 28.592682

102.42 97.81

161.91 141.42

first angle mean: 103.55739

first angle stdev: 17.324764

second angle mean: 125.495895

second angle stdev: 28.625185

106.68 99.47

163.77 145.07

first angle mean: 103.568665

first angle stdev: 17.294477

second angle mean: 125.63408

second angle stdev: 28.665525

109.7 99.72

161.77 149.07

first angle mean: 103.59071

first angle stdev: 17.267246

second angle mean: 125.76405

second angle stdev: 28.695591

109.69 100.2

160.87 152.53

first angle mean: 103.61258

first angle stdev: 17.240128

second angle mean: 125.8899

second angle stdev: 28.720844

106.96 100.4

161.16 154.01

first angle mean: 103.624535

first angle stdev: 17.210472

second angle mean: 126.01585

second angle stdev: 28.746614

103.62 100.46

160.93 154.05

first angle mean: 103.62451

first angle stdev: 17.179821

second angle mean: 126.1401

second angle stdev: 28.77064

101.53 100.75

160.57 152.73

first angle mean: 103.61709

first angle stdev: 17.149786

second angle mean: 126.26219

second angle stdev: 28.792414

100.69 100.86

160.02 149.46

first angle mean: 103.60674

first angle stdev: 17.12034

second angle mean: 126.381485

second angle stdev: 28.81122

102.03 100.51

159.02 143.55

first angle mean: 103.60119

first angle stdev: 17.090427

second angle mean: 126.4964

second angle stdev: 28.82536

102.71 102.0

158.79 138.57

first angle mean: 103.59807

first angle stdev: 17.0605

second angle mean: 126.6097

second angle stdev: 28.838034

104.11 102.49

155.39 126.15

first angle mean: 103.59985

first angle stdev: 17.030672

second angle mean: 126.710335

second angle stdev: 28.837658

106.65 103.86

153.28 119.32

first angle mean: 103.61048

first angle stdev: 17.001926

second angle mean: 126.80292

second angle stdev: 28.829914

110.38 111.86

150.38 120.79

first angle mean: 103.633995

first angle stdev: 16.977055

second angle mean: 126.884796

second angle stdev: 28.813215

111.56 119.63

149.24 124.52

first angle mean: 103.66142

first angle stdev: 16.954048

second angle mean: 126.96215

second angle stdev: 28.793264

112.12 122.55

147.23 120.76

first angle mean: 103.69058

first angle stdev: 16.932053

second angle mean: 127.03203

second angle stdev: 28.768124

114.8 114.94

142.63 107.41

first angle mean: 103.72877

first angle stdev: 16.915432

second angle mean: 127.08564

second angle stdev: 28.733152

104.59 104.48

132.81 103.89

first angle mean: 103.73171

first angle stdev: 16.886518

second angle mean: 127.10524

second angle stdev: 28.68586

104.48 102.82

109.89 101.59

first angle mean: 103.73427

first angle stdev: 16.857733

second angle mean: 127.04648

second angle stdev: 28.654459

104.62 108.53

107.04 99.16

first angle mean: 103.73728

first angle stdev: 16.829119

second angle mean: 126.97844

second angle stdev: 28.629393

104.52 103.71

105.08 96.95

first angle mean: 103.73993

first angle stdev: 16.800632

second angle mean: 126.90421

second angle stdev: 28.609156

105.42 99.93

105.15 93.97

first angle mean: 103.74561

first angle stdev: 16.77251

second angle mean: 126.83071

second angle stdev: 28.588669

106.79 99.84

100.64 87.3

first angle mean: 103.75586

first angle stdev: 16.74518

second angle mean: 126.74253

second angle stdev: 28.580797

107.58 103.11

94.01 83.19

first angle mean: 103.76869

first angle stdev: 16.718523

second angle mean: 126.63268

second angle stdev: 28.595526

105.75 113.81

97.97 73.96

first angle mean: 103.77532

first angle stdev: 16.690933

second angle mean: 126.53681

second angle stdev: 28.595589

122.32 127.06

93.14 71.7

first angle mean: 103.837135

first angle stdev: 16.697342

second angle mean: 126.42549

second angle stdev: 28.612715

128.57 130.09

86.53 74.96

first angle mean: 103.919304

first angle stdev: 16.730227

second angle mean: 126.29295

second angle stdev: 28.65725

123.48 126.11

82.61 78.54

first angle mean: 103.98408

first angle stdev: 16.740263

second angle mean: 126.14831

second angle stdev: 28.719612

117.13 117.84

83.8 80.25

first angle mean: 104.027466

first angle stdev: 16.729614

second angle mean: 126.008545

second angle stdev: 28.77487

113.76 114.23

88.61 88.64

first angle mean: 104.05947

first angle stdev: 16.71137

second angle mean: 125.88552

second angle stdev: 28.807209

100.28 101.57

99.83 88.72

first angle mean: 104.04708

first angle stdev: 16.68535

second angle mean: 125.8001

second angle stdev: 28.798489

95.25 112.09

110.44 100.0

first angle mean: 104.01833

first angle stdev: 16.665628

second angle mean: 125.7499

second angle stdev: 28.764755

98.41 121.48

119.22 113.63

first angle mean: 104.00006

first angle stdev: 16.641533

second angle mean: 125.72862

second angle stdev: 28.72028

98.83 105.81

123.74 116.19

first angle mean: 103.983284

first angle stdev: 16.6171

second angle mean: 125.722176

second angle stdev: 28.673841

95.04 89.44

122.29 108.47

first angle mean: 103.95434

first angle stdev: 16.597963

second angle mean: 125.71107

second angle stdev: 28.628069

85.63 78.52

119.35 96.68

first angle mean: 103.895226

first angle stdev: 16.603716

second angle mean: 125.69055

second angle stdev: 28.584133

85.94 80.86

118.66 101.65

first angle mean: 103.837494

first angle stdev: 16.608135

second angle mean: 125.667946

second angle stdev: 28.540916

89.96 85.39

124.64 114.08

first angle mean: 103.79301

first angle stdev: 16.600042

second angle mean: 125.664635

second angle stdev: 28.495201

91.66 90.94

132.67 122.62

first angle mean: 103.75424

first angle stdev: 16.587643

second angle mean: 125.68703

second angle stdev: 28.452393

92.7 98.97

139.92 130.63

first angle mean: 103.71905

first angle stdev: 16.572914

second angle mean: 125.73236

second angle stdev: 28.418367

93.84 114.06

149.21 147.03

first angle mean: 103.68768

first angle stdev: 16.555918

second angle mean: 125.806885

second angle stdev: 28.403944

93.9 114.39

152.0 149.64

first angle mean: 103.65671

first angle stdev: 16.53884

second angle mean: 125.88977

second angle stdev: 28.397099

94.13 101.05

152.99 138.94

first angle mean: 103.62665

first angle stdev: 16.521372

second angle mean: 125.975266

second angle stdev: 28.392971

93.73 88.2

149.38 126.23

first angle mean: 103.59553

first angle stdev: 16.504679

second angle mean: 126.04887

second angle stdev: 28.378565

91.97 83.58

143.58 125.66

first angle mean: 103.5591

first angle stdev: 16.491598

second angle mean: 126.10381

second angle stdev: 28.35099

91.81 84.46

142.91 131.01

first angle mean: 103.52238

first angle stdev: 16.478863

second angle mean: 126.15635

second angle stdev: 28.322197

91.12 85.71

143.1 136.14

first angle mean: 103.48374

first angle stdev: 16.467686

second angle mean: 126.20914

second angle stdev: 28.293808

92.26 92.62

147.63 148.94

first angle mean: 103.448875

first angle stdev: robot count: 6

16.45395

second angle mean: 126.27566

second angle stdev: 28.27497

95.21 93.58

150.91 153.65

first angle mean: 103.42338

first angle stdev: 16.434835

second angle mean: 126.35193

second angle stdev: 28.26432

102.68 103.25

159.78 171.17

first angle mean: 103.42108

first angle stdev: 16.409504

second angle mean: 126.4551

second angle stdev: 28.281519

103.78 98.95

158.78 164.57

first angle mean: 103.42219

first angle stdev: 16.38425

second angle mean: 126.55456

second angle stdev: 28.294672

101.9 96.56

160.94 155.22

first angle mean: 103.41751

first angle stdev: 16.35932

second angle mean: 126.660034

second angle stdev: 28.315163

101.45 97.81

162.12 152.78

first angle mean: 103.41151

first angle stdev: 16.334648

second angle mean: 126.76848

second angle stdev: 28.339552

100.75 98.86

163.95 151.36

first angle mean: 103.40338

first angle stdev: 16.310389

second angle mean: 126.881836

second angle stdev: 28.37047

100.09 99.32

164.88 151.5

first angle mean: 103.39331

first angle stdev: 16.286604

second angle mean: 126.99733

second angle stdev: 28.404442

99.9 98.63

164.15 152.9

first angle mean: 103.38273

first angle stdev: 16.26304

second angle mean: 127.10991

second angle stdev: 28.434795

100.29 98.68

164.15 154.78

first angle mean: 103.37338

first angle stdev: 16.239344

second angle mean: 127.22182

second angle stdev: 28.46449

102.62 99.87

168.26 157.16

first angle mean: 103.37112

first angle stdev: 16.214922

second angle mean: 127.34542

second angle stdev: 28.510424

103.62 102.87

170.72 161.06

first angle mean: 103.37186

first angle stdev: 16.190561

second angle mean: 127.47567

second angle stdev: 28.566343

103.53 102.74

170.12 159.75

first angle mean: 103.37233

first angle stdev: 16.166307

second angle mean: 127.603355

second angle stdev: 28.618546

104.81 102.25

170.79 158.9

first angle mean: 103.37663

first angle stdev: 16.142351

second angle mean: 127.73228

second angle stdev: 28.67276

104.88 100.7

168.24 157.06

first angle mean: 103.3811

first angle stdev: 16.11852

second angle mean: 127.85282

second angle stdev: 28.714968

103.4 102.32

165.1 157.27

first angle mean: 103.381165

first angle stdev: 16.094587

second angle mean: 127.96335

second angle stdev: 28.743822

103.96 103.11

162.78 155.7

first angle mean: 103.38287

first angle stdev: 16.070793

second angle mean: 128.06636

second angle stdev: 28.763494

105.48 98.88

160.38 144.62

first angle mean: 103.38906

first angle stdev: 16.047474

second angle mean: 128.16168

second angle stdev: 28.774454

105.1 94.5

157.21 126.21

first angle mean: 103.3941

first angle stdev: 16.024126

second angle mean: 128.24712

second angle stdev: 28.775137

104.11 93.61

154.72 108.55

first angle mean: 103.396194

first angle stdev: 16.00066

second angle mean: 128.32475

second angle stdev: 28.768549

98.08 89.67

141.47 89.94

first angle mean: 103.380646

first angle stdev: 15.979829

second angle mean: 128.36317

second angle stdev: 28.735226

110.26 95.77

103.17 79.34

first angle mean: 103.4007

first angle stdev: 15.960828

second angle mean: 128.28973

second angle stdev: 28.725441

106.74 99.97

86.88 69.4

first angle mean: 103.41041

first angle stdev: 15.938626

second angle mean: 128.16936

second angle stdev: 28.770166

87.46 90.18

81.72 68.12

first angle mean: 103.364174

first angle stdev: 15.938592

second angle mean: 128.03473

second angle stdev: 28.836763

87.7 83.43

87.88 75.3

first angle mean: 103.3189

first angle stdev: 15.937741

second angle mean: 127.91867

second angle stdev: 28.875635

93.89 83.92

117.74 97.76

first angle mean: 103.29173

first angle stdev: 15.922784

second angle mean: 127.88934

second angle stdev: 28.839157

97.53 87.54

133.26 122.48

first angle mean: 103.27517

first angle stdev: 15.902882

second angle mean: 127.90477

second angle stdev: 28.799128

92.25 88.38

142.58 132.45

first angle mean: 103.243576

first angle stdev: 15.891012

second angle mean: 127.946815

second angle stdev: 28.768536

counter:3

100.78 99.08

163.46 164.53

first angle mean: 103.23654

first angle stdev: 15.86884

second angle mean: 128.04828

second angle stdev: 28.789877

104.19 104.25

169.17 169.22

first angle mean: 103.23926

first angle stdev: 15.8463

second angle mean: 128.16544

second angle stdev: 28.832266

102.06 100.2

165.71 160.7

first angle mean: 103.23591

first angle stdev: 15.823898

second angle mean: 128.27211

second angle stdev: 28.860546

103.34 95.12

160.75 146.83

first angle mean: 103.2362

first angle stdev: 15.801471

second angle mean: 128.3641

second angle stdev: 28.871286

98.84 94.4

152.2 125.0

first angle mean: 103.223785

first angle stdev: 15.780862

second angle mean: 128.43144

second angle stdev: 28.858221

89.72 86.34

134.34 102.87

first angle mean: 103.18574

first angle stdev: 15.774864

second angle mean: 128.44809

second angle stdev: 28.819246

82.67 78.61

105.21 87.16

first angle mean: 103.12811

first angle stdev: 15.790069

second angle mean: 128.38281

second angle stdev: 28.805012

98.16 87.51

84.87 70.99

first angle mean: 103.1142

first angle stdev: 15.770124

second angle mean: 128.26093

second angle stdev: 28.856422

103.68 97.11

80.53 66.5

first angle mean: 103.11578

first angle stdev: 15.748113

second angle mean: 128.1276

second angle stdev: 28.925997

107.02 105.45

83.91 65.85

first angle mean: 103.126656

first angle stdev: 15.7275095

second angle mean: 128.00444

second angle stdev: 28.979538

107.63 110.79

94.1 83.06

first angle mean: 103.13917

first angle stdev: 15.707439

second angle mean: 127.910255

second angle stdev: 28.994225

110.82 112.36

118.94 109.13

first angle mean: 103.160446

first angle stdev: 15.690863

second angle mean: 127.88541

second angle stdev: 28.957876

98.68 93.81

131.87 119.11

first angle mean: 103.14807

first angle stdev: 15.670939

second angle mean: 127.89641

second angle stdev: 28.918608

92.47 100.61

146.9 134.77

first angle mean: 103.11865

first angle stdev: 15.659345

second angle mean: 127.94877

second angle stdev: 28.89592

counter:4

101.87 108.55

167.76 169.83

first angle mean: 103.11523

first angle stdev: 15.637956

second angle mean: 128.05814

second angle stdev: 28.931343

102.43 104.96

164.35 168.12

first angle mean: 103.11334

first angle stdev: 15.616561

second angle mean: 128.15756

second angle stdev: 28.953892

robot count: 7

98.3 97.54

162.38 158.42

first angle mean: 103.1002

first angle stdev: 15.597236

second angle mean: 128.25107

second angle stdev: 28.969442

98.36 99.17

166.97 163.06

first angle mean: 103.08728

first angle stdev: 15.577932

second angle mean: 128.35657

second angle stdev: 29.00027

99.87 98.85

169.03 163.16

first angle mean: 103.07853

first angle stdev: 15.557653

second angle mean: 128.46709

second angle stdev: 29.03814

102.03 97.66

166.73 159.99

first angle mean: 103.07569

first angle stdev: 15.5366535

second angle mean: 128.57079

second angle stdev: 29.06691

101.88 95.12

160.0 142.43

first angle mean: 103.072464

first angle stdev: 15.515768

second angle mean: 128.65572

second angle stdev: 29.073431

87.55 86.31

139.78 114.61

first angle mean: 103.03062

first angle stdev: 15.51573

second angle mean: 128.68571

second angle stdev: 29.039948

81.68 80.36

109.24 93.83

first angle mean: 102.97322

first angle stdev: 15.534247

second angle mean: 128.63344

second angle stdev: 29.018362

97.86 89.99

88.52 77.28

first angle mean: 102.95951

first angle stdev: 15.515663

second angle mean: 128.5259

second angle stdev: 29.053574

92.98 87.58

82.1 68.8

first angle mean: 102.93284

first angle stdev: 15.503473

second angle mean: 128.40176

second angle stdev: 29.113585

93.1 84.73

91.79 82.15

first angle mean: 102.90662

first angle stdev: 15.49109

second angle mean: 128.30412

second angle stdev: 29.13598

95.32 88.42

118.19 105.25

first angle mean: 102.88643

first angle stdev: 15.4754095

second angle mean: 128.27724

second angle stdev: 29.101873

95.99 100.45

147.91 138.63

first angle mean: 102.86814

first angle stdev: 15.458942

second angle mean: 128.3293

second angle stdev: 29.08079

counter:5

96.2 106.92

159.13 171.41

first angle mean: 102.850494

first angle stdev: 15.442279

second angle mean: 128.4108

second angle stdev: 29.08536

93.53 105.75

158.26 172.5

first angle mean: 102.82591

first angle stdev: 15.429303

second angle mean: 128.48955

second angle stdev: 29.087294

98.86 101.68

165.12 170.79

first angle mean: 102.81547

first angle stdev: 15.410327

second angle mean: 128.58595

second angle stdev: 29.10955

100.37 98.11

169.55 161.62

first angle mean: 102.80905

first angle stdev: 15.390599

second angle mean: 128.69347

second angle stdev: 29.146776

100.35 99.75

166.0 155.16

first angle mean: 102.80262

first angle stdev: 15.370955

second angle mean: 128.79112

second angle stdev: 29.170956

97.53 102.17

152.72 144.36

first angle mean: 102.78885

first angle stdev: 15.353233

second angle mean: 128.8536

second angle stdev: 29.158428

93.8 98.62

138.65 129.52

first angle mean: 102.76544

first angle stdev: 15.340072

second angle mean: 128.8791

second angle stdev: 29.124716

88.61 90.85

114.67 99.25

first angle mean: 102.728676

first angle stdev: 15.337069

second angle mean: 128.84221

second angle stdev: 29.095858

96.98 95.99

97.04 81.29

first angle mean: 102.71378

first angle stdev: 15.319976

second angle mean: 128.75981

second angle stdev: 29.103077

97.73 96.55

78.21 70.5

first angle mean: 102.700905

first angle stdev: 15.302262

second angle mean: 128.6292

second angle stdev: 29.178524

93.83 87.28

78.69 70.64

first angle mean: 102.67805

first angle stdev: 15.289146

second angle mean: 128.50049

second angle stdev: 29.250692

103.58 89.41

104.99 101.75

first angle mean: 102.68036

first angle stdev: 15.269551

second angle mean: 128.44005

second angle stdev: 29.23732

104.55 94.85

140.7 126.98

first angle mean: 102.68516

first angle stdev: 15.250255

second angle mean: 128.4715

second angle stdev: 29.206392

94.03 96.28

154.51 138.24

first angle mean: 102.663025

first angle stdev: 15.237013

second angle mean: 128.53809

second angle stdev: 29.198652

counter:6

95.27 95.41

168.36 160.01

first angle mean: 102.64415

first angle stdev: 15.222134

second angle mean: 128.63966

second angle stdev: 29.23049

95.27 96.85

164.85 162.85

first angle mean: 102.6254

first angle stdev: 15.207294

second angle mean: 128.73181

second angle stdev: 29.250217

93.28 95.37

164.07 163.31

first angle mean: 102.60167

first angle stdev: 15.19526

second angle mean: 128.8215

second angle stdev: 29.267136

92.71 94.64

164.06 165.61

first angle mean: 102.57663

first angle stdev: 15.184153

second angle mean: 128.9107

second angle stdev: 29.283655

92.81 93.04

158.26 159.03

first angle mean: 102.55196

first angle stdev: 15.172888

second angle mean: 128.98482

second angle stdev: 29.283726

91.58 102.98

146.18 142.91

first angle mean: 102.52433

first angle stdev: 15.163742

second angle mean: 129.02814

second angle stdev: 29.25952

86.35 94.08

128.77 110.04

first angle mean: 102.48369

first angle stdev: 15.166312

second angle mean: 129.02748

second angle stdev: 29.22274

90.1 101.77

108.47 89.84

first angle mean: 102.45265

first angle stdev: 15.159945

second angle mean: 128.97595

second angle stdev: 29.204193

93.97 95.37

79.71 68.28

first angle mean: 102.43144

first angle stdev: 15.146909

second angle mean: 128.8528

second angle stdev: 29.271236

96.67 92.96

75.91 66.98

first angle mean: 102.417076

first angle stdev: 15.130738

second angle mean: 128.72078

second angle stdev: 29.353724

95.01 84.1

101.45 88.48

first angle mean: 102.39865

first angle stdev: 15.116411

second angle mean: 128.65294

second angle stdev: 29.348648

91.15 82.24

136.0 116.73

first angle mean: 102.370735

first angle stdev: 15.108013

second angle mean: 128.67117

second angle stdev: 29.314491

89.13 84.4

149.14 132.7

first angle mean: 102.33797

first angle stdev: 15.103641

second angle mean: 128.72183

second angle stdev: 29.295849

98.22 94.47

168.04 158.33

first angle mean: 102.3278

first angle stdev: 15.086367

second angle mean: 128.81892

second angle stdev: 29.324652

counter:7

94.49 94.09

162.17 169.14

first angle mean: 102.30849

first angle stdev: 15.072783

second angle mean: 128.90106

second angle stdev: 29.335135

robot count: 8

ROBOT: Exercise open\_arms\_with\_band done

TRAINING: Exercise 91.28 open\_arms\_with\_band done

90.22

162.23 165.18

first angle mean: 102.281395

first angle stdev: 15.064153

second angle mean: 128.98296

second angle stdev: 29.345499

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\_with\_band/28-06-2024 15-33-18

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

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

Directory created or already exists: Patients/1111/Graphs/open\_arms\_with\_band/28-06-2024 15-33-18

CAMERA: Exercise open\_arms\_with\_band done