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 bend\_elbows\_stick start

CAMERA: Exercise bend\_elbows\_stick start

ROBOT: Exercise bend\_elbows\_stick start

48.67 48.24

15.52 20.66

first angle mean: 48.67

first angle stdev: 0.0

second angle mean: 15.52

second angle stdev: 0.0

13.13 40.63

13.21 13.51

first angle mean: 30.9

first angle stdev: 17.77

second angle mean: 14.365

second angle stdev: 1.1550002

14.96 10.79

13.96 20.75

first angle mean: 25.586668

first angle stdev: 16.33947

second angle mean: 14.23

second angle stdev: 0.9621852

42.46 45.75

17.08 21.12

first angle mean: 29.805

first angle stdev: 15.925347

second angle mean: 14.942499

second angle stdev: 1.4890664

41.12 45.99

16.91 21.96

first angle mean: 32.068

first angle stdev: 14.945837

second angle mean: 15.335999

second angle stdev: 1.5470048

43.5 45.69

16.67 21.34

first angle mean: 33.97333

first angle stdev: 14.29335

second angle mean: 15.5583315

second angle stdev: 1.4971685

45.17 45.1

16.88 21.8

first angle mean: 35.572857

first angle stdev: 13.800905

second angle mean: 15.747141

second angle stdev: 1.4612294

46.54 45.74

16.6 21.91

first angle mean: 36.94375

first angle stdev: 13.409411

second angle mean: 15.85375

second angle stdev: 1.3956534

46.35 45.46

16.13 21.95

first angle mean: 37.988888

first angle stdev: 12.983516

second angle mean: 15.884445

second angle stdev: 1.3186955

46.18 45.48

15.57 21.65

first angle mean: 38.808

first angle stdev: 12.559977

second angle mean: 15.853

second angle stdev: 1.2545758

44.82 44.38

15.26 21.47

first angle mean: 39.354546

first angle stdev: 12.099543

second angle mean: 15.79909

second angle stdev: 1.2082778

44.07 43.54

15.43 21.77

first angle mean: 39.7475

first angle stdev: 11.657512

second angle mean: 15.768333

second angle stdev: 1.161327

44.12 40.97

15.53 22.14

first angle mean: 40.083847

first angle stdev: 11.260615

second angle mean: 15.75

second angle stdev: 1.1175728

44.41 38.5

15.6 22.47

first angle mean: 40.392857

first angle stdev: 10.908051

second angle mean: 15.739286

second angle stdev: 1.0776128

44.78 36.43

16.08 23.72

first angle mean: 40.685337

first angle stdev: 10.594847

second angle mean: 15.762

second angle stdev: 1.0445361

44.04 37.67

16.11 23.41

first angle mean: 40.895

first angle stdev: 10.290505

second angle mean: 15.783751

second angle stdev: 1.0148699

41.53 40.5

14.76 22.01

first angle mean: 40.93235

first angle stdev: 9.984375

second angle mean: 15.723531

second angle stdev: 1.013607

39.58 41.09

13.18 20.89

first angle mean: 40.857224

first angle stdev: 9.708013

second angle mean: 15.582223

second angle stdev: 1.1444529

37.25 40.64

11.88 19.54

first angle mean: 40.66737

first angle stdev: 9.483355

second angle mean: 15.387369

second angle stdev: 1.3871773

32.63 35.91

11.04 17.32

first angle mean: 40.2655

first angle stdev: 9.407751

second angle mean: 15.170001

second angle stdev: 1.6509936

26.82 30.64

10.5 16.57

first angle mean: 39.625237

first angle stdev: 9.617168

second angle mean: 14.94762

second angle stdev: 1.893422

18.88 28.55

10.5 16.96

first angle mean: 38.682274

first angle stdev: 10.342083

second angle mean: 14.745456

second angle stdev: 2.0689054

11.59 28.93

12.09 18.05

first angle mean: 37.50435

first angle stdev: 11.52534

second angle mean: 14.630001

second angle stdev: 2.094641

9.48 29.75

12.96 19.97

first angle mean: 36.336666

first angle stdev: 12.595982

second angle mean: 14.560417

second angle stdev: 2.0775154

8.23 30.11

12.75 21.13

first angle mean: 35.2124

first angle stdev: 13.514727

second angle mean: 14.488001

second angle stdev: 2.0662255

8.46 30.93

12.0 20.56

first angle mean: 34.183464

first angle stdev: 14.215863

second angle mean: 14.392308

second angle stdev: 2.0818284

9.16 31.58

11.57 19.02

first angle mean: 33.256668

first angle stdev: 14.728835

second angle mean: 14.287779

second angle stdev: 2.111298

10.77 29.8

11.05 17.72

first angle mean: 32.45357

first angle stdev: 15.053396

second angle mean: 14.172143

second angle stdev: 2.1585665

11.5 28.35

10.57 17.38

first angle mean: 31.731035

first angle stdev: 15.277712

second angle mean: 14.047932

second angle stdev: 2.220527

11.32 28.14

10.06 16.68

first angle mean: 31.050667

first angle stdev: 15.461316

second angle mean: 13.915

second angle stdev: 2.2975707

11.51 28.7

9.69 16.47

first angle mean: 30.420324

first angle stdev: 15.596825

second angle mean: 13.77871

second angle stdev: 2.3802936

11.78 29.85

9.44 16.7

first angle mean: 29.837812

first angle stdev: 15.690057

second angle mean: 13.643125

second angle stdev: 2.4614267

14.29 31.76

9.18 16.29

first angle mean: 29.366667

first angle stdev: 15.678688

second angle mean: 13.507878

second angle stdev: 2.541723

20.28 35.88

8.8 14.52

first angle mean: 29.099411

first angle stdev: 15.522509

second angle mean: 13.3694105

second angle stdev: 2.6273673

30.49 43.1

9.02 13.33

first angle mean: 29.139143

first angle stdev: 15.300906

second angle mean: 13.245142

second angle stdev: 2.6890302

39.46 50.34

8.94 13.87

first angle mean: 29.425833

first angle stdev: 15.181934

second angle mean: 13.125554

second angle stdev: 2.744187

55.24 61.38

8.46 15.14

first angle mean: 30.123512

first angle stdev: 15.549435

second angle mean: 12.999458

second angle stdev: 2.8105948

66.58 69.57

8.36 16.08

first angle mean: 31.082891

first angle stdev: 16.415768

second angle mean: 12.877367

second angle stdev: 2.8710787

83.14 82.11

12.17 13.69

first angle mean: 32.41769

first angle stdev: 18.17338

second angle mean: 12.859229

second angle stdev: 2.8362355

103.19 90.17

19.76 9.74

first angle mean: 34.187

first angle stdev: 21.07374

second angle mean: 13.031751

second angle stdev: 3.0006466

127.49 101.03

29.63 7.6

first angle mean: 36.46268

first angle stdev: 25.306522

second angle mean: 13.436586

second angle stdev: 3.9166234

141.38 126.04

27.07 12.72

first angle mean: 38.960712

first angle stdev: 29.681955

second angle mean: 13.761191

second angle stdev: 4.3925858

141.97 140.37

19.9 15.6

first angle mean: 41.356277

first angle stdev: 33.189705

second angle mean: 13.9039545

second angle stdev: 4.4387054

143.11 151.99

13.22 18.23

first angle mean: 43.66886

first angle stdev: 36.14536

second angle mean: 13.88841

second angle stdev: 4.3891597

147.17 156.06

11.19 17.86

first angle mean: 45.968887

first angle stdev: 38.861538

second angle mean: 13.828445

second angle stdev: 4.358306

149.19 154.93

12.32 16.53

first angle mean: 48.212822

first angle stdev: 41.279232

second angle mean: 13.795653

second angle stdev: 4.316282

151.05 151.06

13.53 15.63

first angle mean: 50.40085

first angle stdev: 43.450466

second angle mean: 13.790002

second angle stdev: 4.2702894

counter:1

142.73 144.84

15.07 15.86

first angle mean: 52.32437

first angle stdev: 44.972305

second angle mean: 13.816666

second angle stdev: 4.2295256

133.13 139.06

14.11 16.51

first angle mean: 53.973465

first angle stdev: 45.953987

second angle mean: 13.822652

second angle stdev: 4.1863503

125.51 121.47

20.06 12.64

first angle mean: 55.404194

first angle stdev: 46.5815

second angle mean: 13.947399

second angle stdev: 4.235274

107.6 95.29

19.74 9.02

first angle mean: 56.427643

first angle stdev: 46.686855

second angle mean: 14.060979

second angle stdev: 4.2697606

83.55 74.29

15.96 12.07

first angle mean: 56.949226

first angle stdev: 46.385563

second angle mean: 14.097499

second angle stdev: 4.2365413

61.94 62.96

12.05 15.14

first angle mean: 57.043392

first angle stdev: 45.950897

second angle mean: 14.0588665

second angle stdev: 4.20562

52.16 56.51

10.2 15.72

first angle mean: 56.952957

first angle stdev: 45.5282

second angle mean: 13.987407

second angle stdev: 4.1988506

38.38 46.61

8.23 16.42

first angle mean: 56.615265

first angle stdev: 45.180607

second angle mean: 13.882726

second angle stdev: 4.2310195

27.8 39.36

9.01 17.34

first angle mean: 56.100716

first angle stdev: 44.93771

second angle mean: 13.795714

second angle stdev: 4.2424374

22.03 32.41

10.53 18.51

first angle mean: 55.502987

first angle stdev: 44.76581

second angle mean: 13.738421

second angle stdev: 4.2268586

20.12 29.99

11.51 19.47

first angle mean: 54.892937

first angle stdev: 44.616585

second angle mean: 13.700001

second angle stdev: 4.20029

18.57 29.97

11.88 19.75

first angle mean: 54.277294

first angle stdev: 44.484634

second angle mean: 13.669153

second angle stdev: 4.171163

16.68 30.3

10.13 18.74

first angle mean: 53.650673

first angle stdev: 44.374184

second angle mean: 13.6101675

second angle stdev: 4.1609983

20.9 32.51

8.6 17.76

first angle mean: 53.113773

first angle stdev: 44.20502

second angle mean: 13.528033

second angle stdev: 4.1755037

30.12 39.24

8.62 17.07

first angle mean: 52.74291

first angle stdev: 43.94265

second angle mean: 13.448872

second angle stdev: 4.1875873

41.69 49.1

8.89 15.54

first angle mean: 52.567463

first angle stdev: 43.61439

second angle mean: 13.376509

second angle stdev: 4.193113

59.8 62.81

8.87 14.44

first angle mean: 52.680466

first angle stdev: 43.281605

second angle mean: 13.306094

second angle stdev: 4.197599

75.94 71.69

10.45 14.39

first angle mean: 53.038303

first angle stdev: 43.04268

second angle mean: 13.262155

second angle stdev: 4.1799917

91.86 79.11

15.13 12.06

first angle mean: 53.626514

first angle stdev: 42.977795

second angle mean: 13.290455

second angle stdev: 4.1544747

112.21 93.57

19.96 8.2

first angle mean: 54.500893

first angle stdev: 43.243286

second angle mean: 13.390001

second angle stdev: 4.201912

127.7 114.4

19.84 9.17

first angle mean: 55.57735

first angle stdev: 43.819168

second angle mean: 13.484855

second angle stdev: 4.242549

146.01 140.73

16.56 12.26

first angle mean: 56.887966

first angle stdev: 44.82294

second angle mean: 13.529422

second angle stdev: 4.2276974

152.69 153.71

14.07 14.35

first angle mean: 58.25657

first angle stdev: 45.93078

second angle mean: 13.537145

second angle stdev: 4.197881

counter:2

129.77 140.12

11.36 15.0

first angle mean: 59.263794

first angle stdev: 46.37822

second angle mean: 13.50648

second angle stdev: 4.176102

123.29 106.57

20.21 8.44

first angle mean: 60.15305

first angle stdev: 46.660583

second angle mean: 13.599583

second angle stdev: 4.220553

96.99 85.7

16.14 6.5

first angle mean: 60.65767

first angle stdev: 46.537285

second angle mean: 13.634383

second angle stdev: 4.201934

77.54 75.02

13.45 10.7

first angle mean: 60.885807

first angle stdev: 46.26286

second angle mean: 13.631892

second angle stdev: 4.1735

65.98 68.96

11.35 14.79

first angle mean: 60.95373

first angle stdev: 45.95712

second angle mean: 13.601466

second angle stdev: 4.153837

56.0 59.19

8.99 16.39

first angle mean: 60.88855

first angle stdev: 45.657257

second angle mean: 13.54079

second angle stdev: 4.159743

46.46 49.68

7.95 16.29

first angle mean: 60.701164

first angle stdev: 45.389217

second angle mean: 13.468181

second angle stdev: 4.1808376

34.02 34.64

6.87 15.83

first angle mean: 60.3591

first angle stdev: 45.19711

second angle mean: 13.383589

second angle stdev: 4.219752

29.05 28.37

6.88 15.78

first angle mean: 59.96278

first angle stdev: 45.046326

second angle mean: 13.301265

second angle stdev: 4.25553

24.62 26.11

6.24 16.16

first angle mean: 59.520996

first angle stdev: 44.9358

second angle mean: 13.213

second angle stdev: 4.301005

21.53 25.89

6.43 16.21

first angle mean: 59.051968

first angle stdev: 44.85416

second angle mean: 13.12926

second angle stdev: 4.339501

21.09 27.08

6.25 15.45

first angle mean: 58.589016

first angle stdev: 44.774105

second angle mean: 13.045367

second angle stdev: 4.37855

24.56 29.34

6.18 14.94

first angle mean: 58.179028

first angle stdev: 44.658154

second angle mean: 12.962652

second angle stdev: 4.416078

30.58 34.39

6.92 13.34

first angle mean: 57.85047

first angle stdev: 44.49234

second angle mean: 12.890717

second angle stdev: 4.438366

37.22 41.11

7.3 12.75

first angle mean: 57.60776

first angle stdev: 44.28575

second angle mean: 12.824944

second angle stdev: 4.4531713

51.62 57.26

7.57 13.76

first angle mean: 57.538136

first angle stdev: 44.032204

second angle mean: 12.76384

second angle stdev: 4.462903

66.97 74.31

7.84 15.17

first angle mean: 57.646553

first angle stdev: 43.789955

second angle mean: 12.707243

second angle stdev: 4.468113

79.05 74.71

10.26 13.2

first angle mean: 57.88977

first angle stdev: 43.5995

second angle mean: 12.679432

second angle stdev: 4.4502196

85.14 77.99

12.94 12.18

first angle mean: 58.195953

first angle stdev: 43.44891

second angle mean: 12.68236

second angle stdev: 4.425233

107.01 101.39

16.71 8.0

first angle mean: 58.73833

first angle stdev: 43.508774

second angle mean: 12.727111

second angle stdev: 4.4207854

121.18 119.8

15.71 9.61

first angle mean: 59.424503

first angle stdev: 43.75598

second angle mean: 12.759889

second angle stdev: 4.407412

140.75 142.23

12.69 11.92

first angle mean: 60.308475

first angle stdev: 44.327007

second angle mean: 12.759129

second angle stdev: 4.383399

151.06 151.75

11.6 13.89

first angle mean: 61.2843

first angle stdev: 45.07062

second angle mean: 12.746665

second angle stdev: 4.3614078

robot count: 1

counter:3

135.05 142.03

12.36 14.6

first angle mean: 62.06904

first angle stdev: 45.46451

second angle mean: 12.742551

second angle stdev: 4.338328

117.69 121.09

12.57 10.29

first angle mean: 62.654522

first angle stdev: 45.57945

second angle mean: 12.740734

second angle stdev: 4.31547

100.43 97.22

14.02 7.13

first angle mean: 63.04802

first angle stdev: 45.50335

second angle mean: 12.754063

second angle stdev: 4.2948995

75.84 77.76

12.58 9.21

first angle mean: 63.179893

first angle stdev: 45.28663

second angle mean: 12.752268

second angle stdev: 4.2727394

64.02 67.49

9.29 13.92

first angle mean: 63.188465

first angle stdev: 45.05506

second angle mean: 12.716939

second angle stdev: 4.265101

57.21 58.04

7.41 15.77

first angle mean: 63.12808

first angle stdev: 44.83092

second angle mean: 12.663334

second angle stdev: 4.2765574

51.14 49.25

6.27 14.79

first angle mean: 63.008198

first angle stdev: 44.62215

second angle mean: 12.5994005

second angle stdev: 4.302408

39.58 38.99

5.7 14.39

first angle mean: 62.776237

first angle stdev: 44.461243

second angle mean: 12.531089

second angle stdev: 4.335214

30.79 32.17

6.51 15.26

first angle mean: 62.462646

first angle stdev: 44.354866

second angle mean: 12.472059

second angle stdev: 4.354511

25.76 29.05

7.23 16.04

first angle mean: 62.106308

first angle stdev: 44.285496

second angle mean: 12.421165

second angle stdev: 4.363699

24.73 29.37

7.99 15.91

first angle mean: 61.746925

first angle stdev: 44.22274

second angle mean: 12.378557

second angle stdev: 4.3641443

25.51 27.83

7.05 15.38

first angle mean: 61.40181

first angle stdev: 44.15215

second angle mean: 12.32781

second angle stdev: 4.3740377

30.77 29.78

6.57 14.27

first angle mean: 61.11283

first angle stdev: 44.04305

second angle mean: 12.273491

second angle stdev: 4.3887954

38.1 37.58

6.92 12.19

first angle mean: 60.89776

first angle stdev: 43.892647

second angle mean: 12.223458

second angle stdev: 4.3985057

48.58 47.62

7.17 11.23

first angle mean: 60.783707

first angle stdev: 43.704895

second angle mean: 12.176667

second angle stdev: 4.4047685

65.94 66.95

7.75 11.77

first angle mean: 60.83101

first angle stdev: 43.506733

second angle mean: 12.136056

second angle stdev: 4.404783

85.25 82.76

9.39 10.24

first angle mean: 61.053

first angle stdev: 43.37049

second angle mean: 12.111092

second angle stdev: 4.3924546

103.18 92.11

11.9 8.55

first angle mean: 61.432526

first angle stdev: 43.357784

second angle mean: 12.10919

second angle stdev: 4.372669

122.05 110.09

12.72 8.52

first angle mean: 61.97375

first angle stdev: 43.538807

second angle mean: 12.114644

second angle stdev: 4.353484

137.1 131.97

12.53 10.43

first angle mean: 62.638584

first angle stdev: 43.91306

second angle mean: 12.1183195

second angle stdev: 4.3343525

147.24 148.14

12.88 12.83

first angle mean: 63.380707

first angle stdev: 44.426056

second angle mean: 12.125001

second angle stdev: 4.315885

145.83 152.37

12.95 14.15

first angle mean: 64.09766

first angle stdev: 44.88998

second angle mean: 12.1321745

second angle stdev: 4.297762

135.93 147.77

11.59 15.42

first angle mean: 64.7169

first angle stdev: 45.18669

second angle mean: 12.127501

second angle stdev: 4.2794905

126.87 137.64

11.04 15.17

first angle mean: 65.24812

first angle stdev: 45.355488

second angle mean: 12.118206

second angle stdev: 4.2623386

115.67 115.45

14.52 10.13

first angle mean: 65.67543

first angle stdev: 45.39879

second angle mean: 12.13856

second angle stdev: 4.249946

100.07 89.78

14.67 7.27

first angle mean: 65.964455

first angle stdev: 45.31653

second angle mean: 12.159833

second angle stdev: 4.238355

80.81 72.08

11.63 9.81

first angle mean: 66.088165

first angle stdev: 45.14749

second angle mean: 12.1554165

second angle stdev: 4.2209334

59.71 59.06

8.99 13.6

first angle mean: 66.03545

first angle stdev: 44.964252

second angle mean: 12.129256

second angle stdev: 4.213213

50.81 52.65

8.15 15.53

first angle mean: 65.91066

first angle stdev: 44.800632

second angle mean: 12.09664

second angle stdev: 4.211221

40.34 42.52

8.21 15.81

first angle mean: 65.70277

first angle stdev: 44.67719

second angle mean: 12.065041

second angle stdev: 4.2085648

35.8 33.09

8.55 16.02

first angle mean: 65.46161

first angle stdev: 44.57698

second angle mean: 12.036694

second angle stdev: 4.2033343

31.88 30.42

8.6 15.71

first angle mean: 65.192955

first angle stdev: 44.49899

second angle mean: 12.0092

second angle stdev: 4.1976666

25.05 30.26

8.45 15.59

first angle mean: 64.87436

first angle stdev: 44.464954

second angle mean: 11.980952

second angle stdev: 4.192887

23.54 28.92

7.96 14.81

first angle mean: 64.54889

first angle stdev: 44.439972

second angle mean: 11.949291

second angle stdev: 4.191441

27.19 30.02

8.19 13.7

first angle mean: 64.257034

first angle stdev: 44.388073

second angle mean: 11.919922

second angle stdev: 4.1881347

33.37 34.97

8.26 11.53

first angle mean: 64.01759

first angle stdev: 44.29859

second angle mean: 11.89155

second angle stdev: 4.1842003

robot count: 2

46.42 44.17

8.05 11.6

first angle mean: 63.882225

first angle stdev: 44.15466

second angle mean: 11.862

second angle stdev: 4.181567

63.39 59.86

7.77 13.42

first angle mean: 63.878475

first angle stdev: 43.985825

second angle mean: 11.830764

second angle stdev: 4.180774

75.05 73.89

8.08 12.67

first angle mean: 63.963097

first angle stdev: 43.829605

second angle mean: 11.802349

second angle stdev: 4.177586

94.02 90.08

13.54 11.13

first angle mean: 64.189095

first angle stdev: 43.74165

second angle mean: 11.815413

second angle stdev: 4.164558

106.04 97.07

16.89 8.07

first angle mean: 64.50141

first angle stdev: 43.726727

second angle mean: 11.853284

second angle stdev: 4.171912

123.16 114.27

17.19 9.5

first angle mean: 64.93592

first angle stdev: 43.853874

second angle mean: 11.892815

second angle stdev: 4.181546

136.17 130.95

14.69 11.14

first angle mean: 65.4597

first angle stdev: 44.114147

second angle mean: 11.913383

second angle stdev: 4.1729927

148.07 148.27

12.79 13.82

first angle mean: 66.0627

first angle stdev: 44.511833

second angle mean: 11.919781

second angle stdev: 4.158405

149.41 155.22

11.93 15.26

first angle mean: 66.666664

first angle stdev: 44.910133

second angle mean: 11.919855

second angle stdev: 4.143311

143.78 151.22

10.86 15.95

first angle mean: 67.221436

first angle stdev: 45.220375

second angle mean: 11.9122305

second angle stdev: 4.1293516

134.45 137.68

11.78 15.41

first angle mean: 67.70164

first angle stdev: 45.412872

second angle mean: 11.911286

second angle stdev: 4.1145926

123.14 118.31

13.72 11.06

first angle mean: 68.09482

first angle stdev: 45.490055

second angle mean: 11.924114

second angle stdev: 4.102784

119.06 103.05

18.12 8.54

first angle mean: 68.45373

first angle stdev: 45.5295

second angle mean: 11.967746

second angle stdev: 4.1210117

104.79 76.25

18.09 8.9

first angle mean: 68.70783

first angle stdev: 45.470955

second angle mean: 12.010559

second angle stdev: 4.1381464

84.29 64.0

13.18 10.37

first angle mean: 68.81604

first angle stdev: 45.331264

second angle mean: 12.018681

second angle stdev: 4.124896

61.72 59.98

8.72 12.97

first angle mean: 68.7671

first angle stdev: 45.178497

second angle mean: 11.995931

second angle stdev: 4.119703

44.75 50.23

8.13 14.93

first angle mean: 68.6026

first angle stdev: 45.06707

second angle mean: 11.969452

second angle stdev: 4.117933

36.07 41.58

8.97 16.76

first angle mean: 68.38129

first angle stdev: 44.99305

second angle mean: 11.949048

second angle stdev: 4.1113014

26.03 31.87

9.62 17.65

first angle mean: 68.09513

first angle stdev: 44.974815

second angle mean: 11.93331

second angle stdev: 4.101828

23.34 31.58

9.39 17.83

first angle mean: 67.79476

first angle stdev: 44.97234

second angle mean: 11.916242

second angle stdev: 4.0933113

21.84 31.43

8.59 18.05

first angle mean: 67.488396

first angle stdev: 44.977917

second angle mean: 11.894067

second angle stdev: 4.088614

22.14 30.42

8.37 17.57

first angle mean: 67.18807

first angle stdev: 44.979378

second angle mean: 11.8707285

second angle stdev: 4.0850654

26.25 29.53

8.56 16.03

first angle mean: 66.91875

first angle stdev: 44.95317

second angle mean: 11.848948

second angle stdev: 4.080393

32.53 31.65

8.95 14.4

first angle mean: 66.693985

first angle stdev: 44.891632

second angle mean: 11.83

second angle stdev: 4.0737395

40.47 37.5

9.6 12.51

first angle mean: 66.5237

first angle stdev: 44.79519

second angle mean: 11.81552

second angle stdev: 4.0644403

47.02 44.44

9.92 11.61

first angle mean: 66.39787

first angle stdev: 44.67775

second angle mean: 11.80329

second angle stdev: 4.054149

59.97 59.45

9.43 11.32

first angle mean: 66.35667

first angle stdev: 44.537277

second angle mean: 11.788076

second angle stdev: 4.045571

71.82 67.29

9.37 11.87

first angle mean: 66.39146

first angle stdev: 44.39734

second angle mean: 11.7726755

second angle stdev: 4.0372515

93.3 84.58

11.23 11.26

first angle mean: 66.56177

first angle stdev: 44.308033

second angle mean: 11.76924

second angle stdev: 4.0246854

113.03 110.83

13.56 9.81

first angle mean: 66.85402

first angle stdev: 44.320988

second angle mean: 11.780503

second angle stdev: 4.014506

130.94 136.05

14.0 10.6

first angle mean: 67.25456

first angle stdev: 44.47

second angle mean: 11.794375

second angle stdev: 4.0057616

144.24 149.92

14.0 12.8

first angle mean: 67.732735

first angle stdev: 44.74239

second angle mean: 11.808075

second angle stdev: 3.99706

145.4 151.24

13.6 14.03

first angle mean: 68.21216

first angle stdev: 45.017

second angle mean: 11.819136

second angle stdev: 3.9871757

141.5 148.62

12.61 14.92

first angle mean: 68.66177

first angle stdev: 45.242092

second angle mean: 11.823988

second angle stdev: 3.975406

131.59 136.26

11.86 14.54

first angle mean: 69.04548

first angle stdev: 45.36921

second angle mean: 11.824207

second angle stdev: 3.963268

126.04 112.03

18.51 9.45

first angle mean: 69.39091

first angle stdev: 45.44731

second angle mean: 11.864727

second angle stdev: 3.985168

111.53 90.9

20.28 7.08

first angle mean: 69.64475

first angle stdev: 45.42739

second angle mean: 11.9154215

second angle stdev: 4.0261555

81.78robot count: 3

71.6

14.18 10.96

first angle mean: 69.717415

first angle stdev: 45.300854

second angle mean: 11.928982

second angle stdev: 4.017884

43.89 46.78

7.77 12.76

first angle mean: 69.56368

first angle stdev: 45.209503

second angle mean: 11.904226

second angle stdev: 4.018662

23.63 34.53

10.17 14.87

first angle mean: 69.29189

first angle stdev: 45.213

second angle mean: 11.893965

second angle stdev: 4.0089617

25.9 30.55

10.49 15.95

first angle mean: 69.036644

first angle stdev: 45.201782

second angle mean: 11.885706

second angle stdev: 3.9985948

28.25 30.05

9.85 15.64

first angle mean: 68.79813

first angle stdev: 45.17659

second angle mean: 11.8738

second angle stdev: 3.9899065

32.2 33.38

10.3 14.45

first angle mean: 68.58535

first angle stdev: 45.130928

second angle mean: 11.864651

second angle stdev: 3.9800897

42.23 45.24

10.79 12.29

first angle mean: 68.43301

first angle stdev: 45.044632

second angle mean: 11.858439

second angle stdev: 3.969406

57.28 62.01

10.44 11.89

first angle mean: 68.368904

first angle stdev: 44.92292

second angle mean: 11.850287

second angle stdev: 3.9594352

69.04 66.52

9.3 10.2

first angle mean: 68.37274

first angle stdev: 44.79441

second angle mean: 11.835714

second angle stdev: 3.9527836

87.85 76.35

10.02 9.25

first angle mean: 68.483406

first angle stdev: 44.69096

second angle mean: 11.8253975

second angle stdev: 3.9439

107.05 90.68

13.2 7.73

first angle mean: 68.7013

first angle stdev: 44.658184

second angle mean: 11.833163

second angle stdev: 3.9340928

125.92 115.41

14.74 9.42

first angle mean: 69.02275

first angle stdev: 44.737446

second angle mean: 11.849494

second angle stdev: 3.9290378

134.1 132.74

14.29 11.47

first angle mean: 69.386314

first angle stdev: 44.875217

second angle mean: 11.863129

second angle stdev: 3.922268

139.41 145.55

13.18 13.41

first angle mean: 69.77534

first angle stdev: 45.052044

second angle mean: 11.870444

second angle stdev: 3.912582

139.93 151.28

12.0 14.55

first angle mean: 70.162926

first angle stdev: 45.227364

second angle mean: 11.87116

second angle stdev: 3.9017704

139.64 149.2

11.78 15.94

first angle mean: 70.54468

first angle stdev: 45.3944

second angle mean: 11.870659

second angle stdev: 3.8910425

137.95 145.67

12.05 16.09

first angle mean: 70.91301

first angle stdev: 45.54211

second angle mean: 11.871639

second angle stdev: 3.880419

131.65 139.55

12.48 14.94

first angle mean: 71.2431

first angle stdev: 45.637173

second angle mean: 11.874946

second angle stdev: 3.8701186

125.27 128.71

12.91 13.69

first angle mean: 71.53513

first angle stdev: 45.68573

second angle mean: 11.88054

second angle stdev: 3.8603907

125.04 109.38

21.82 10.75

first angle mean: 71.8228

first angle stdev: 45.73044

second angle mean: 11.933978

second angle stdev: 3.9180079

112.27 88.13

21.55 8.1

first angle mean: 72.039085

first angle stdev: 45.7033

second angle mean: 11.985401

second angle stdev: 3.9699535

71.57 69.67

11.26 10.08

first angle mean: 72.0366

first angle stdev: 45.581596

second angle mean: 11.981543

second angle stdev: 3.9597325

51.48 56.72

7.58 12.64

first angle mean: 71.92783

first angle stdev: 45.485302

second angle mean: 11.958253

second angle stdev: 3.9621315

43.58 46.92

8.79 14.24

first angle mean: 71.77863

first angle stdev: 45.411793

second angle mean: 11.941579

second angle stdev: 3.958335

38.75 41.19

10.57 14.96

first angle mean: 71.605705

first angle stdev: 45.355434

second angle mean: 11.934398

second angle stdev: 3.9491997

35.86 36.02

10.69 15.13

first angle mean: 71.41953

first angle stdev: 45.310284

second angle mean: 11.9279175

second angle stdev: 3.9399204

31.84 31.7

9.01 14.82

first angle mean: 71.21446

first angle stdev: 45.281998

second angle mean: 11.912798

second angle stdev: 3.9352796

29.01 30.09

7.64 14.35

first angle mean: 70.99691

first angle stdev: 45.266144

second angle mean: 11.890774

second angle stdev: 3.9370322

28.28 30.27

7.06 14.21

first angle mean: 70.77785

first angle stdev: 45.252907

second angle mean: 11.866

second angle stdev: 3.9420547

29.14 31.42

7.72 13.45

first angle mean: 70.56541

first angle stdev: 45.2347

second angle mean: 11.844848

second angle stdev: 3.9430654

33.24 36.67

8.52 12.67

first angle mean: 70.37594

first angle stdev: 45.197647

second angle mean: 11.8279705

second angle stdev: 3.9401357

40.7 46.67

10.27 12.24

first angle mean: 70.22606

first angle stdev: 45.13242

second angle mean: 11.820102

second angle stdev: 3.931725

49.43 56.83

9.97 13.01

first angle mean: 70.12156

first angle stdev: 45.04289

second angle mean: 11.810804

second angle stdev: 3.9240148

65.51 72.7

10.09 12.1

first angle mean: 70.098495

first angle stdev: 44.931316

second angle mean: 11.802199

second angle stdev: 3.916074

89.14 87.31

11.07 9.37

first angle mean: 70.19323

first angle stdev: 44.839428

second angle mean: 11.798557

second angle stdev: 3.90666

103.59 99.76

12.64 8.82

first angle mean: 70.35857

first angle stdev: 44.789677

second angle mean: 11.802722

second angle stdev: 3.8974257

robot count: 4

115.63 111.65

12.17 7.68

first angle mean: 70.58158

first angle stdev: 44.791508

second angle mean: 11.804532

second angle stdev: 3.8878992

127.74 126.97

11.28 9.2

first angle mean: 70.86177

first angle stdev: 44.85957

second angle mean: 11.801961

second angle stdev: 3.8785312

138.15 142.5

11.24 14.48

first angle mean: 71.19

first angle stdev: 44.994926

second angle mean: 11.79922

second angle stdev: 3.8692582

138.23 146.07

11.63 15.88

first angle mean: 71.51544

first angle stdev: 45.126785

second angle mean: 11.798399

second angle stdev: 3.859873

130.08 144.09

11.5 15.07

first angle mean: 71.79836

first angle stdev: 45.20042

second angle mean: 11.796958

second angle stdev: 3.850594

120.37 135.72

11.8 13.27

first angle mean: 72.031876

first angle stdev: 45.216625

second angle mean: 11.796971

second angle stdev: 3.8413267

114.73 114.46

13.16 8.33

first angle mean: 72.236176

first angle stdev: 45.20445

second angle mean: 11.8034935

second angle stdev: 3.83328

104.51 91.77

13.78 5.17

first angle mean: 72.38986

first angle stdev: 45.15139

second angle mean: 11.812905

second angle stdev: 3.8265622

68.05 62.59

9.69 7.05

first angle mean: 72.369286

first angle stdev: 45.045254

second angle mean: 11.802844

second angle stdev: 3.820267

52.75 55.21

8.73 10.87

first angle mean: 72.27675

first angle stdev: 44.958992

second angle mean: 11.78835

second angle stdev: 3.8170576

46.23 45.77

7.85 13.5

first angle mean: 72.154465

first angle stdev: 44.888653

second angle mean: 11.769859

second angle stdev: 3.8175912

37.04 38.2

8.38 14.88

first angle mean: 71.99038

first angle stdev: 44.847633

second angle mean: 11.754019

second angle stdev: 3.815671

29.85 30.59

8.93 16.4

first angle mean: 71.79438

first angle stdev: 44.83499

second angle mean: 11.740884

second angle stdev: 3.8116336

29.88 28.28

8.56 16.3

first angle mean: 71.60033

first angle stdev: 44.821487

second angle mean: 11.726158

second angle stdev: 3.8089252

31.06 26.63

7.83 15.67

first angle mean: 71.413506

first angle stdev: 44.802307

second angle mean: 11.708202

second angle stdev: 3.8092895

32.08 26.5

7.6 14.81

first angle mean: 71.23308

first angle stdev: 44.778385

second angle mean: 11.689357

second angle stdev: 3.8106678

34.0 28.91

7.69 13.2

first angle mean: 71.063065

first angle stdev: 44.746502

second angle mean: 11.671095

second angle stdev: 3.8115067

39.94 35.45

8.09 11.62

first angle mean: 70.92159

first angle stdev: 44.69375

second angle mean: 11.654818

second angle stdev: 3.810456

52.59 47.2

8.59 13.21

first angle mean: 70.83864

first angle stdev: 44.609486

second angle mean: 11.64095

second angle stdev: 3.8073857

64.9 58.78

9.11 14.14

first angle mean: 70.81189

first angle stdev: 44.510677

second angle mean: 11.629548

second angle stdev: 3.8025799

83.79 73.92

11.62 12.82

first angle mean: 70.870094

first angle stdev: 44.419228

second angle mean: 11.629506

second angle stdev: 3.7940443

109.19 94.04

15.97 10.21

first angle mean: 71.04116

first angle stdev: 44.39353

second angle mean: 11.648885

second angle stdev: 3.7966092

124.03 108.05

16.88 7.75

first angle mean: 71.276665

first angle stdev: 44.43479

second angle mean: 11.672133

second angle stdev: 3.8041105

134.75 125.6

15.11 9.44

first angle mean: 71.557526

first angle stdev: 44.53607

second angle mean: 11.6873455

second angle stdev: 3.8025374

142.37 141.87

12.44 12.58

first angle mean: 71.86948

first angle stdev: 44.684635

second angle mean: 11.69066

second angle stdev: 3.7944798

142.59 150.84

11.47 14.89

first angle mean: 72.17966

first angle stdev: 44.83078

second angle mean: 11.689693

second angle stdev: 3.7861776

139.8 151.76

10.89 15.82

first angle mean: 72.47493

first angle stdev: 44.95445

second angle mean: 11.686201

second angle stdev: 3.7782698

132.13 140.74

10.56 14.42

first angle mean: 72.73431

first angle stdev: 45.028008

second angle mean: 11.681305

second angle stdev: 3.7707753

121.64 117.37

13.38 10.34

first angle mean: 72.946014

first angle stdev: 45.045017

second angle mean: 11.688659

second angle stdev: 3.764257

108.75 97.57

15.52 10.11

first angle mean: 73.10034

first angle stdev: 45.00899

second angle mean: 11.705173

second angle stdev: 3.7645125

85.95 79.51

12.1 9.09

first angle mean: 73.155495

first angle stdev: 44.92016

second angle mean: 11.706868

second angle stdev: 3.756514

71.95 70.97

9.01 10.79

first angle mean: 73.15034

first angle stdev: 44.82414

second angle mean: 11.695342

second angle stdev: 3.7526047

59.57 61.26

7.58 13.18

first angle mean: 73.09255

first angle stdev: 44.7374

second angle mean: 11.67783

second angle stdev: 3.7541819

48.19 46.91

8.35 13.14

first angle mean: 72.98704

first angle stdev: 44.671814

second angle mean: 11.66373

second angle stdev: 3.7524507

41.0 37.37

8.78 13.34

first angle mean: 72.85207

first angle stdev: 44.625664

second angle mean: 11.651561

second angle stdev: 3.7491884

31.96 29.36

8.46 14.05

first angle mean: 72.68025

first angle stdev: 44.6103

second angle mean: 11.638151

second angle stdev: 3.7469952

28.76robot count: 5

30.8

8.31 14.44

first angle mean: 72.49648

first angle stdev: 44.607056

second angle mean: 11.624226

second angle stdev: 3.7453144

27.82 32.37

8.19 14.4

first angle mean: 72.31033

first angle stdev: 44.606956

second angle mean: 11.609918

second angle stdev: 3.7440443

28.55 32.43

8.26 14.07

first angle mean: 72.12876

first angle stdev: 44.603107

second angle mean: 11.596017

second angle stdev: 3.742469

32.04 33.91

9.13 13.24

first angle mean: 71.963104

first angle stdev: 44.585087

second angle mean: 11.585827

second angle stdev: 3.7380776

36.89 36.56

8.95 12.38

first angle mean: 71.81877

first angle stdev: 44.54987

second angle mean: 11.574981

second angle stdev: 3.7341924

41.73 41.76

9.46 12.02

first angle mean: 71.69546

first angle stdev: 44.500023

second angle mean: 11.566312

second angle stdev: 3.7289813

53.05 52.94

10.63 12.97

first angle mean: 71.61935

first angle stdev: 44.425026

second angle mean: 11.56249

second angle stdev: 3.7218423

66.77 68.44

9.58 11.73

first angle mean: 71.59963

first angle stdev: 44.335712

second angle mean: 11.554432

second angle stdev: 3.716411

89.68 80.8

9.72 9.01

first angle mean: 71.67283

first angle stdev: 44.26076

second angle mean: 11.547004

second angle stdev: 3.7107093

111.69 90.56

11.97 8.45

first angle mean: 71.83419

first angle stdev: 44.244175

second angle mean: 11.54871

second angle stdev: 3.7033174

125.15 111.05

12.57 9.97

first angle mean: 72.04831

first angle stdev: 44.283806

second angle mean: 11.552811

second angle stdev: 3.6964378

134.01 130.23

12.54 12.51

first angle mean: 72.29616

first angle stdev: 44.36786

second angle mean: 11.55676

second angle stdev: 3.6895638

137.76 143.16

11.5 14.87

first angle mean: 72.55697

first angle stdev: 44.471

second angle mean: 11.556534

second angle stdev: 3.6822085

136.09 147.57

10.34 15.98

first angle mean: 72.80908

first angle stdev: 44.56205

second angle mean: 11.551705

second angle stdev: 3.675691

134.93 145.87

10.26 15.62

first angle mean: 73.05463

first angle stdev: 44.64437

second angle mean: 11.546601

second angle stdev: 3.6693149

130.94 138.14

10.34 14.56

first angle mean: 73.28252

first angle stdev: 44.70361

second angle mean: 11.54185

second angle stdev: 3.6628644

121.47 126.17

11.01 13.34

first angle mean: 73.47149

first angle stdev: 44.717407

second angle mean: 11.539765

second angle stdev: 3.655826

113.22 112.56

12.54 9.46

first angle mean: 73.626755

first angle stdev: 44.6988

second angle mean: 11.543673

second angle stdev: 3.6492121

80.5 76.96

10.3 7.58

first angle mean: 73.6535

first angle stdev: 44.613804

second angle mean: 11.538833

second angle stdev: 3.6429286

57.36 60.11

8.48 11.29

first angle mean: 73.59035

first angle stdev: 44.53877

second angle mean: 11.526977

second angle stdev: 3.6408262

42.39 46.73

8.5 11.68

first angle mean: 73.46989

first angle stdev: 44.494793

second angle mean: 11.515289

second angle stdev: 3.6386364

37.37 42.18

10.06 11.9

first angle mean: 73.33104

first angle stdev: 44.46533

second angle mean: 11.509692

second angle stdev: 3.6327496

30.19 34.83

11.7 14.62

first angle mean: 73.16576

first angle stdev: 44.46002

second angle mean: 11.510422

second angle stdev: 3.6258025

28.75 32.92

12.21 15.94

first angle mean: 72.99623

first angle stdev: 44.459526

second angle mean: 11.513092

second angle stdev: 3.6191335

29.23 31.95

12.48 15.88

first angle mean: 72.82981

first angle stdev: 44.4566

second angle mean: 11.516768

second angle stdev: 3.6127367

28.68 33.01

10.65 16.49

first angle mean: 72.662575

first angle stdev: 44.455128

second angle mean: 11.513485

second angle stdev: 3.606281

32.0 36.21

11.24 17.04

first angle mean: 72.50913

first angle stdev: 44.441162

second angle mean: 11.512453

second angle stdev: 3.5995095

35.68 43.14

12.45 16.72

first angle mean: 72.37068

first angle stdev: 44.414772

second angle mean: 11.515978

second angle stdev: 3.593195

44.9 52.19

12.69 16.2

first angle mean: 72.26779

first angle stdev: 44.363266

second angle mean: 11.520374

second angle stdev: 3.5871768

62.82 69.3

11.33 12.52

first angle mean: 72.23254

first angle stdev: 44.28417

second angle mean: 11.519664

second angle stdev: 3.5804968

100.58 84.53

12.93 8.65

first angle mean: 72.33792

first angle stdev: 44.23543

second angle mean: 11.524908

second angle stdev: 3.574866

123.21 103.04

14.83 8.08

first angle mean: 72.52633

first angle stdev: 44.261448

second angle mean: 11.537148

second angle stdev: 3.5738835

137.23 118.75

15.65 11.63

first angle mean: 72.76509

first angle stdev: 44.35356

second angle mean: 11.552325

second angle stdev: 3.5759895

144.5 137.84

15.11 13.13

first angle mean: 73.028824

first angle stdev: 44.48432

second angle mean: 11.565405

second angle stdev: 3.5758982

146.5 148.93

14.86 15.98

first angle mean: 73.29795

first angle stdev: 44.62406

second angle mean: 11.577472

second angle stdev: 3.574888

141.71 149.38

14.39 16.17

first angle mean: 73.54762

first angle stdev: 44.733185

second angle mean: 11.587737

second angle stdev: 3.5723867

robot count: 6

136.26 141.71

13.29 15.42

first angle mean: 73.775665

first angle stdev: 44.811054

second angle mean: 11.593926

second angle stdev: 3.567357

122.48 123.57

13.11 11.21

first angle mean: 73.95213

first angle stdev: 44.825424

second angle mean: 11.599421

second angle stdev: 3.5620537

118.32 108.48

18.28 8.8

first angle mean: 74.112305

first angle stdev: 44.823494

second angle mean: 11.623538

second angle stdev: 3.5781224

100.16 80.09

17.57 8.92

first angle mean: 74.20601

first angle stdev: 44.76997

second angle mean: 11.644928

second angle stdev: 3.5893793

71.73 64.59

11.98 11.73

first angle mean: 74.19713

first angle stdev: 44.68991

second angle mean: 11.646129

second angle stdev: 3.5829968

52.55 53.38

9.64 13.74

first angle mean: 74.11982

first angle stdev: 44.628723

second angle mean: 11.638965

second angle stdev: 3.5785947

39.32 44.24

8.24 13.92

first angle mean: 73.99598

first angle stdev: 44.597412

second angle mean: 11.626868

second angle stdev: 3.577951

30.57 35.91

8.49 13.77

first angle mean: 73.84199

first angle stdev: 44.59305

second angle mean: 11.615746

second angle stdev: 3.5764654

28.59 31.24

8.12 13.69

first angle mean: 73.68208

first angle stdev: 44.595108

second angle mean: 11.603393

second angle stdev: 3.5761623

25.65 29.92

7.36 13.65

first angle mean: 73.512955

first angle stdev: 44.607353

second angle mean: 11.588451

second angle stdev: 3.5786986

26.8 32.69

7.36 13.32

first angle mean: 73.349045

first angle stdev: 44.614616

second angle mean: 11.573614

second angle stdev: 3.5811536

27.79 34.18

7.73 13.18

first angle mean: 73.18975

first angle stdev: 44.61767

second angle mean: 11.560175

second angle stdev: 3.5820796

30.78 36.14

8.2 13.37

first angle mean: 73.041985

first angle stdev: 44.609917

second angle mean: 11.548467

second angle stdev: 3.5813112

34.9 39.92

8.89 13.59

first angle mean: 72.909546

first angle stdev: 44.588886

second angle mean: 11.539235

second angle stdev: 3.578507

40.63 48.19

9.11 13.12

first angle mean: 72.79785

first angle stdev: 44.552017

second angle mean: 11.53083

second angle stdev: 3.5751574

53.03 55.8

9.66 14.02

first angle mean: 72.72969

first angle stdev: 44.490234

second angle mean: 11.524379

second angle stdev: 3.5706725

70.7 69.62

9.54 12.27

first angle mean: 72.72272

first angle stdev: 44.41388

second angle mean: 11.51756

second angle stdev: 3.5664232

88.44 79.36

9.49 9.69

first angle mean: 72.77654

first angle stdev: 44.34727

second angle mean: 11.510616

second angle stdev: 3.5622807

107.49 91.73

11.04 8.12

first angle mean: 72.89502

first angle stdev: 44.317795

second angle mean: 11.50901

second angle stdev: 3.5563025

128.19 112.04

12.65 10.21

first angle mean: 73.08309

first angle stdev: 44.359337

second angle mean: 11.512891

second angle stdev: 3.550871

137.65 126.06

13.13 10.32

first angle mean: 73.30196

first angle stdev: 44.44282

second angle mean: 11.518373

second angle stdev: 3.546093

144.04 139.85

14.26 12.65

first angle mean: 73.54095

first angle stdev: 44.557148

second angle mean: 11.527635

second angle stdev: 3.5436707

142.85 144.89

14.15 14.6

first angle mean: 73.774315

first angle stdev: 44.6629

second angle mean: 11.536465

second angle stdev: 3.5409598

138.98 143.23

13.5 15.4

first angle mean: 73.99312

first angle stdev: 44.74707

second angle mean: 11.543054

second angle stdev: 3.536837

134.44 133.73

11.76 13.83

first angle mean: 74.19529

first angle stdev: 44.808292

second angle mean: 11.543778

second angle stdev: 3.53094

121.1 114.13

12.47 10.87

first angle mean: 74.35163

first angle stdev: 44.81517

second angle mean: 11.546866

second angle stdev: 3.5254543

114.81 100.37

17.14 9.77

first angle mean: 74.486046

first angle stdev: 44.801197

second angle mean: 11.565449

second angle stdev: 3.5342782

99.71 73.42

17.6 13.64

first angle mean: 74.56957

first angle stdev: 44.75043

second angle mean: 11.58543

second angle stdev: 3.5454116

71.53 58.21

9.8 13.66

first angle mean: 74.55953

first angle stdev: 44.67686

second angle mean: 11.579537

second angle stdev: 3.541037

48.87 48.81

7.61 15.51

first angle mean: 74.47504

first angle stdev: 44.627567

second angle mean: 11.56648

second angle stdev: 3.5425074

35.94 42.48

11.07 17.46

first angle mean: 74.34869

first angle stdev: 44.608772

second angle mean: 11.564853

second angle stdev: 3.5368094

25.22 35.71

13.24 20.04

first angle mean: 74.18814

first angle stdev: 44.624

second angle mean: 11.570327

second angle stdev: 3.5323195

22.36 32.39

14.2 20.47

first angle mean: 74.01932

first angle stdev: 44.649033

second angle mean: 11.578893

second angle stdev: 3.5297437

21.03 29.6

14.52 20.63

first angle mean: 73.847275

first angle stdev: 44.678307

second angle mean: 11.588442

second angle stdev: 3.5279787

23.8 28.79

14.59 20.77

first angle mean: 73.6853

first angle stdev: 44.696426

second angle mean: 11.598156

second angle stdev: 3.5263882

robot count: 7

30.08 33.08

15.37 22.04

first angle mean: 73.54465

first angle stdev: 44.69273

second angle mean: 11.610322

second angle stdev: 3.5271866

36.79 40.07

16.2 23.68

first angle mean: 73.42646

first angle stdev: 44.669308

second angle mean: 11.62508

second angle stdev: 3.5310845

45.7 49.59

15.82 24.63

first angle mean: 73.33759

first angle stdev: 44.62519

second angle mean: 11.638526

second angle stdev: 3.5333858

52.86 60.22

15.5 22.72

first angle mean: 73.27216

first angle stdev: 44.568832

second angle mean: 11.650863

second angle stdev: 3.5344608

68.41 73.48

13.69 17.54

first angle mean: 73.25668

first angle stdev: 44.49865

second angle mean: 11.657357

second angle stdev: 3.5306983

94.55 79.42

14.27 22.04

first angle mean: 73.32428

first angle stdev: 44.444103

second angle mean: 11.665651

second angle stdev: 3.528152

113.04 97.42

15.48 21.72

first angle mean: 73.44996

first angle stdev: 44.42976

second angle mean: 11.677722

second angle stdev: 3.5290735

127.77 123.11

14.22 17.13

first angle mean: 73.62132

first angle stdev: 44.46409

second angle mean: 11.685741

second angle stdev: 3.5263858

138.64 135.46

12.73 17.9

first angle mean: 73.825775

first angle stdev: 44.543125

second angle mean: 11.689025

second angle stdev: 3.5213223

140.08 141.0

12.32 17.37

first angle mean: 74.03348

first angle stdev: 44.627205

second angle mean: 11.691003

second angle stdev: 3.5159752

137.48 141.04

12.52 16.82

first angle mean: 74.23175

first angle stdev: 44.69792

second angle mean: 11.693594

second angle stdev: 3.5107825

134.99 139.74

12.83 16.36

first angle mean: 74.42102

first angle stdev: 44.756504

second angle mean: 11.697135

second angle stdev: 3.5058818

135.53 140.05

13.02 15.82

first angle mean: 74.61081

first angle stdev: 44.81612

second angle mean: 11.701243

second angle stdev: 3.5012074

136.74 139.89

13.47 16.59

first angle mean: 74.803154

first angle stdev: 44.879616

second angle mean: 11.706718

second angle stdev: 3.497164

138.33 141.19

13.53 17.35

first angle mean: 74.99923

first angle stdev: 44.948647

second angle mean: 11.712347

second angle stdev: 3.4932275

133.26 136.28

13.84 15.32

first angle mean: 75.17848

first angle stdev: 44.99529

second angle mean: 11.718893

second angle stdev: 3.489839

119.51 121.35

14.0 11.48

first angle mean: 75.314476

first angle stdev: 44.993065

second angle mean: 11.72589

second angle stdev: 3.4867651

84.72 91.21

12.74 9.5

first angle mean: 75.34324

first angle stdev: 44.927216

second angle mean: 11.7289915

second angle stdev: 3.48188

48.16 57.6

11.37 12.75

first angle mean: 75.26036

first angle stdev: 44.883705

second angle mean: 11.727897

second angle stdev: 3.4766243

28.62 40.04

10.05 16.77

first angle mean: 75.1186

first angle stdev: 44.888924

second angle mean: 11.722796

second angle stdev: 3.4725652

15.83 30.01

9.78 19.13

first angle mean: 74.93894

first angle stdev: 44.93917

second angle mean: 11.716909

second angle stdev: 3.468944

31.55 37.34

12.31 18.08

first angle mean: 74.80785

first angle stdev: 44.934376

second angle mean: 11.718701

second angle stdev: 3.4638526

52.77 54.04

14.14 18.29

first angle mean: 74.74147

first angle stdev: 44.8829

second angle mean: 11.725995

second angle stdev: 3.4611762

105.5 88.63

12.38 20.31

first angle mean: 74.83384

first angle stdev: 44.84705

second angle mean: 11.727959

second angle stdev: 3.4561608

139.44 133.04

11.84 18.16

first angle mean: 75.027275

first angle stdev: 44.918766

second angle mean: 11.728293

second angle stdev: 3.4509883

144.39 148.29

11.41 15.1

first angle mean: 75.23433

first angle stdev: 45.01102

second angle mean: 11.727344

second angle stdev: 3.4458776

123.86 126.55

12.3 13.89

first angle mean: 75.37904

first angle stdev: 45.021973

second angle mean: 11.729048

second angle stdev: 3.4408872

75.13 73.03

9.81 14.81

first angle mean: 75.3783

first angle stdev: 44.955128

second angle mean: 11.723353

second angle stdev: 3.4373636

51.38 51.5

9.76 16.23

first angle mean: 75.3073

first angle stdev: 44.907494

second angle mean: 11.717545

second angle stdev: 3.433931

32.87 41.73

9.45 20.93

first angle mean: 75.18212

first angle stdev: 44.900234

second angle mean: 11.7108555

second angle stdev: 3.4310672

18.55 31.26

5.92 20.14

first angle mean: 75.01556

first angle stdev: 44.93892

second angle mean: 11.693823

second angle stdev: 3.4403396

20.21 30.92

5.11 17.45

first angle mean: 74.854836

first angle stdev: 44.970734

second angle mean: 11.674516

second angle stdev: 3.4536896

25.92 33.08

6.65 17.47

first angle mean: 74.71175

first angle stdev: 44.98261

second angle mean: 11.659825

second angle stdev: 3.4592912

31.15 33.95

8.86 17.24

first angle mean: 74.58475

first angle stdev: 44.97835

second angle mean: 11.651662

second angle stdev: 3.4575415

37.94 40.18

10.01 15.38

first angle mean: 74.478226

first angle stdev: 44.956238

second angle mean: 11.646889

second angle stdev: 3.4536438

53.66 55.65

10.07 14.21

first angle mean: 74.417885

first angle stdev: 44.904984

second angle mean: 11.642319

second angle stdev: 3.4496765

68.61 70.63

8.5 13.16

first angle mean: 74.40109

first angle stdev: 44.84113

second angle mean: 11.633237

second angle stdev: 3.4488158

116.04 108.29

14.81 12.5

first angle mean: 74.521095

first angle stdev: 44.83207

second angle mean: 11.642392

second angle stdev: 3.4480505

140.27 134.02

17.07 15.07

first angle mean: 74.71003

first angle stdev: 44.90574

second angle mean: 11.657989

second angle stdev: 3.4553287

160.49 160.88

18.7 19.36

first angle mean: 74.95582

first angle stdev: 45.075165

second angle mean: 11.678165

second angle stdev: 3.470846

counter:4

134.97 141.28

14.85 16.6

first angle mean: 75.12729

first angle stdev: 45.12457

second angle mean: 11.687228

second angle stdev: 3.4700165

113.94 113.68

13.42 9.8

first angle mean: 75.23786

first angle stdev: 45.107704

second angle mean: 11.692164

second angle stdev: 3.4663002

80.43 61.21

9.58 11.33

first angle mean: 75.25262

first angle stdev: 45.044434

second angle mean: 11.686166

second angle stdev: 3.4631984

62.05 56.85

7.99 9.04

first angle mean: 75.21521

first angle stdev: 44.98606

second angle mean: 11.675694

second angle stdev: 3.4638643

51.42 60.77

robot count: 87.56

ROBOT: Exercise 12.6

bend\_elbows\_stickfirst angle mean: 75.147995

first angle stdev: 44.940224 done

second angle mean: TRAINING: Exercise 11.664068 bend\_elbows\_stick

second angle stdev: done

3.4658592

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/bend\_elbows\_stick/28-06-2024 15-41-38

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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Directory created or already exists: Patients/1111/Graphs/bend\_elbows\_stick/28-06-2024 15-41-38

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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/bend\_elbows\_stick/28-06-2024 15-41-38

CAMERA: Exercise bend\_elbows\_stick done

Robot Done

Exception in thread Thread-2:

Traceback (most recent call last):

File "C:\Users\yaels\anaconda3\envs\Gymmy\Lib\threading.py", line 1045, in \_bootstrap\_inner

self.run()

File "C:\Users\yaels\יעל פרוייקט גמר\zedcheck\TrainingNew.py", line 23, in run

self.finish\_training()

File "C:\Users\yaels\יעל פרוייקט גמר\zedcheck\TrainingNew.py", line 91, in finish\_training

self.check\_points\_and\_send\_email()

File "C:\Users\yaels\יעל פרוייקט גמר\zedcheck\TrainingNew.py", line 142, in check\_points\_and\_send\_email

if (s.points\_in\_current\_level\_before\_training + points\_in\_this\_training) < 100: #checks whether the sum of the points before the training and in it are less than 100

^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^

AttributeError: module 'Settings' has no attribute 'points\_in\_current\_level\_before\_training'