WORLDSKILLS SHANGHAI 2026 | SKILL 23

Navigation Task

Course Layout | VERSION 2

Routes start and finish at Robot Home. Coordinates are (x, y) in metres in the ROS map frame - origin at the top-left corner of the court, x increasing down the court, y increasing to the right.

Navigation routes - Version 2

DIE ROLL 1 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#1	#5	#6	#11	#4	#3	Home
Coordinates	0.3, 0.3	1.0, 0.3	0.325, 3.65	1.0, 1.293	1.675, 2.932	0.325, 2.932	0.325, 2.164	0.3, 0.3

DIE ROLL 2 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#7	#9	#10	#8	#6	#12	Home
Coordinates	0.3, 0.3	1.0, 2.164	1.675, 0.3	1.675, 1.293	1.0, 2.932	1.0, 1.293	1.675, 3.65	0.3, 0.3

DIE ROLL 3 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#2	#4	#8	#3	#1	#12	Home
Coordinates	0.3, 0.3	0.325, 1.293	0.325, 2.932	1.0, 2.932	0.325, 2.164	1.0, 0.3	1.675, 3.65	0.3, 0.3

DIE ROLL 4 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#1	#5	#10	#12	#3	#2	Home
Coordinates	0.3, 0.3	1.0, 0.3	0.325, 3.65	1.675, 1.293	1.675, 3.65	0.325, 2.164	0.325, 1.293	0.3, 0.3

DIE ROLL 5 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#2	#5	#7	#11	#8	#1	Home
Coordinates	0.3, 0.3	0.325, 1.293	0.325, 3.65	1.0, 2.164	1.675, 2.932	1.0, 2.932	1.0, 0.3	0.3, 0.3

DIE ROLL 6 — 6 waypoints | route length 15.6 m

Step	Start	1	2	3	4	5	6	End
Waypoint	Home	#9	#11	#3	#5	#7	#10	Home
Coordinates	0.3, 0.3	1.675, 0.3	1.675, 2.932	0.325, 2.164	0.325, 3.65	1.0, 2.164	1.675, 1.293	0.3, 0.3

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