

Supplementary Table 1: Target locations (cm), distance from home base to target (cm), and index of difficulty (bits):  $ID = \log_2(\text{target distance}/\text{target width} + 1)$ . All targets 10 cm diameter. Origin of reference frame was at the base of the robot.

Target	X (forward/back)	Y (left/right)	Z (up/down)	target distance	Index of difficulty
Home	40	0	40		
1	46.7	30.6	20	37.2	2.2
2	60.5	12.9	40	24.2	1.8
3	46.4	30.4	60	36.9	2.2
4	52.5	-17.7	20	29.5	2.0
5	44.6	-48.3	40	48.5	2.5
6	52.4	-17.6	60	29.4	2.0
7	30.8	-30.6	20	37.7	2.3
8	17.0	-12.9	40	26.4	1.9
9	30.8	-30.6	60	37.7	2.3
10	25.0	17.7	20	30.6	2.0
11	32.9	48.3	40	48.8	2.6
12	25.0	17.7	60	30.6	2.0