

Table R1: Statistical significance of the results on different environments. We compare the results of APC and other baselines using the t-test (Independent two-sample t-test). Here the P value measures the difference between the results of APC and other baselines. The larger the P-value, the more significant the gap between the results of APC and other baselines is.

	Difficulty	APC	MAT-Dec	MAPPO	QMIX
			P value		
8m vs 9m	Hard	-	0.024110111	0.043788896	0.02995819
2c vs 64zg	Hard	-	0.03059866	0.012061778	0.192158275
MMM2	Hard+	-	0.072246827	0.054032746	0.112933502
6h vs 8z	Hard+	-	0.043013592	0.012577676	3.77162170755386e-07
3s5z vs 3s6z	Hard+	-	1.23852745289267e-06	5.699197380614e-07	7.15091581930235e-10

	APC	MAT-Dec	MAPPO
		P value	
HalfCheetach 6x1	-	2.87567629281205e-06	3.84452256528448e-16
HalfCheetach 3x2	-	1.49602620593625e-08	4.18576574615009e-18

	APC	MAT-Dec	MAPPO
		P value	
pass and shoot with keeper	-	0.0459836413184845	0.000390329560808566
3 vs 1 with keeper	-	0.11105565421839	0.000587972438974831
counterattack easy	-	0.000259515349199831	0.0000700445540948698

Table R2: Statistical significance of the results of ablation study.

	APC	APC without prediction loss	APC with MLP
		P value	
6h vs 8z	-	2.42927354010507e-15	0.000582529928709688
HalfCheetach 6x1	-	1.08403674592191e-06	0.000885138236085222