Results for Homework 2

	RRT	RRT-connect	RRT-star	PRM
Mean Planning time(s)	0.15	0.05	2.3	10
Mean number of samples	~4000	~1000	~4000	10000
Mean plan length	40	20	38	42

Summary:
Mean time (best to worst): RRT connect<RRT<RRT*<PRM
Number of samples (best to worst): PRM<RRT*<RRT<RRT_connect
Plan Length(best to worst): RRT connect<(RRT and RRT*)<=PRM

From above results,
- **We can see that RRT connect is fastest which comes from the fact that we are doing bidirectional search and trying to move as much as possible (connect operation). According to data, the step size can be very large which reduces the path length as compared to RRT, RRT*, PRM.**
- **RRT* is slowest of all and the reason being the rewiring step that increases the computations. But, it results in a better path in terms of smoothing. The path length are similar to RRT.**
- **PRM highly depends on the connectivity of the graph. Here, radius of 1 has been used to create edges and same radius used to connect start and goal vertices to the graph**
- **RRT and RRT* use the most samples to find a path due to their nature of sampling.**