1. Question — Your company has implemented a new process to increase manufacturing speed. Previously it took 2 seconds on average. To verify that the new method is faster, time was measured 25 times resulting in an average of 1.9 seconds with a standard deviation of 0.2. Perform a t-test to check if the process got faster ($\alpha = 0.05$)

2. Question — You implemented a new trading algorithm that needs to outperform the annual bond interest yield of 5% Over the last 4 years your algorithm yielded 5.9% with a std of 1.1%. Perform a t-test if your algorithm is better using an $\alpha = 0.01$

3. Question — You need to check if your new warehouse has a different (lower or higher) delivery time compared to your old ones. Your old warehouses have an avg. delivery time of 46 minutes. Tracking the delivery times for 20 times returned an average of 44 with a standard deviation of 1.8. Perform a t-test to check if delivery times differ using an $\alpha$ of 0.05