

Intelligent Systems Assignment 1

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Test:

```
n = 100;
maxsteps = 200;
temp = [0.5, 0.2, 0.1, 0.05, 0.02, 0.01];
method = 1;

meanresults = zeros(size(temp));
standarddeviationresults = zeros(size(temp));

% Try the different temperatures
for index = 1:length(temp)
    results = tsp(n, maxsteps, temp(index), method);
    lastFifty = results(length(results) - 49:length(results));
    meanresults(index) = mean(lastFifty);
    standarddeviationresults(index) = sqrt(var(lastFifty));
    fprintf('mean: %f\n', mean(lastFifty));
    fprintf('variance: %f\n', var(lastFifty));
end

% Plot the results in a graph
figure(3); semilogx(0,0); hold on;
semilogx(temp, meanresults);
errorbar(temp, meanresults, standarddeviationresults)
title(['n=', num2str(n, '%d'), ' ...',
       'Steps=', num2str(maxsteps, '%d')], 'fontsize', 16);
xlabel(['Temperatures'], 'fontsize', 16);
ylabel(['Mean'], 'fontsize', 16);
```

Test:

```
for jstep=1:ceil(maxsteps);
    for ins = 1:100
        j = ceil(rand*n); len = ceil(rand*(n/2));
```