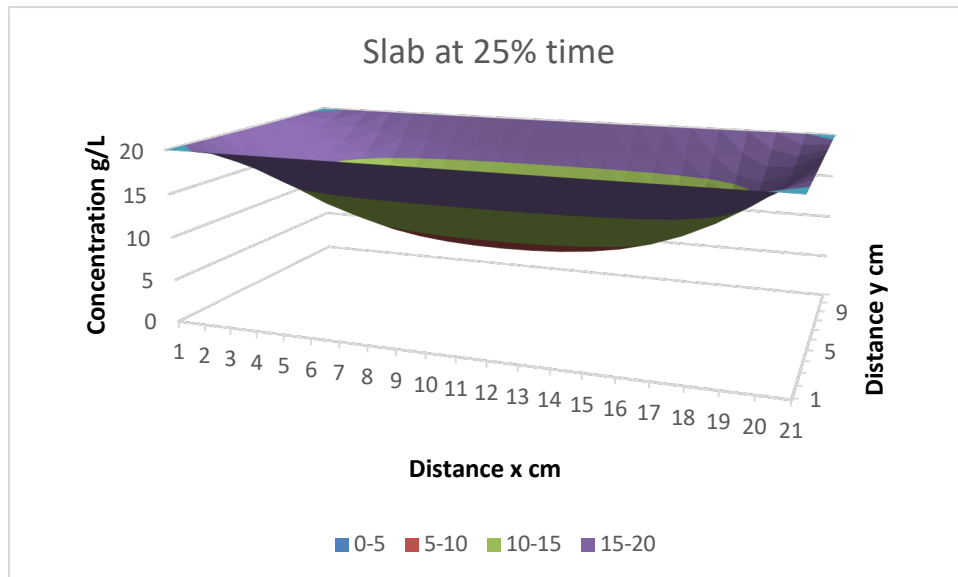
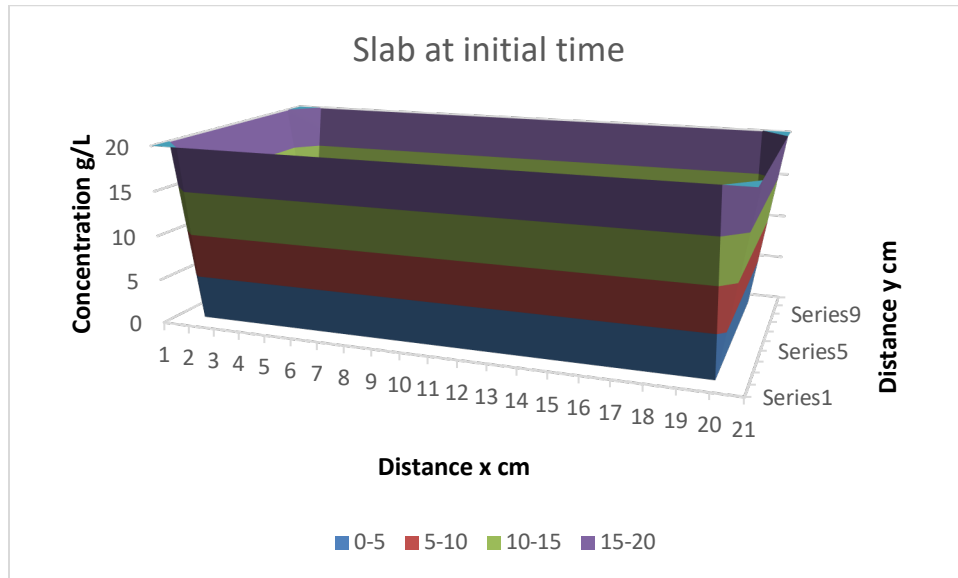
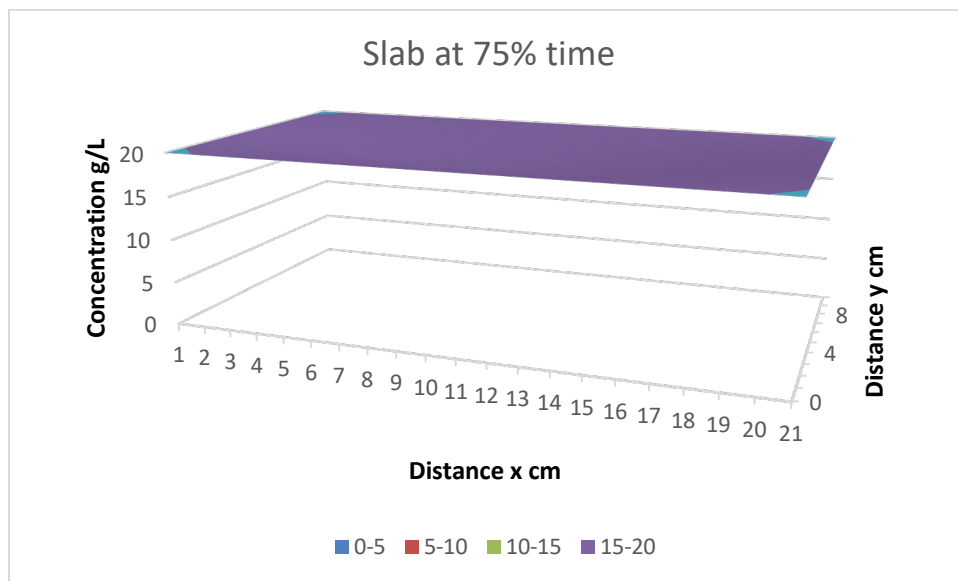
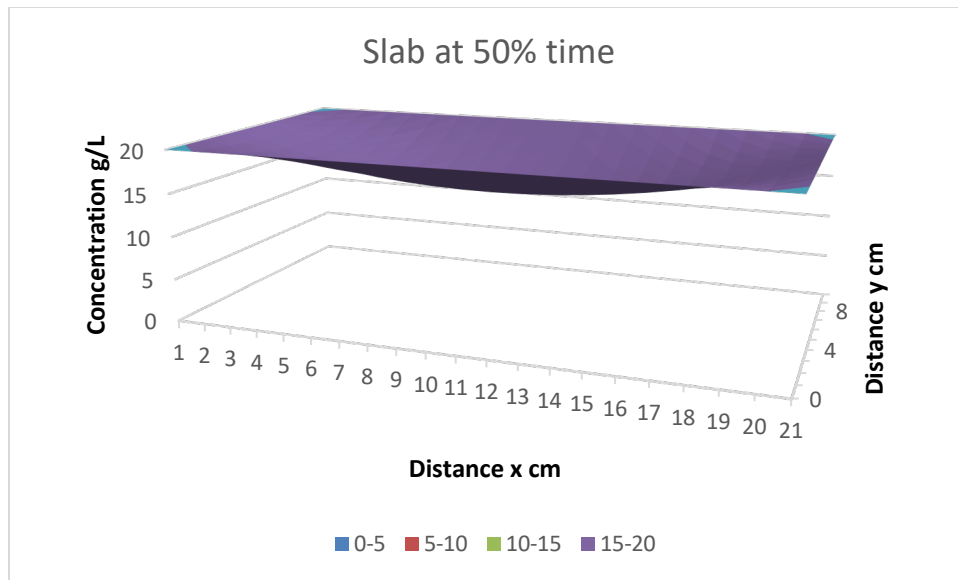
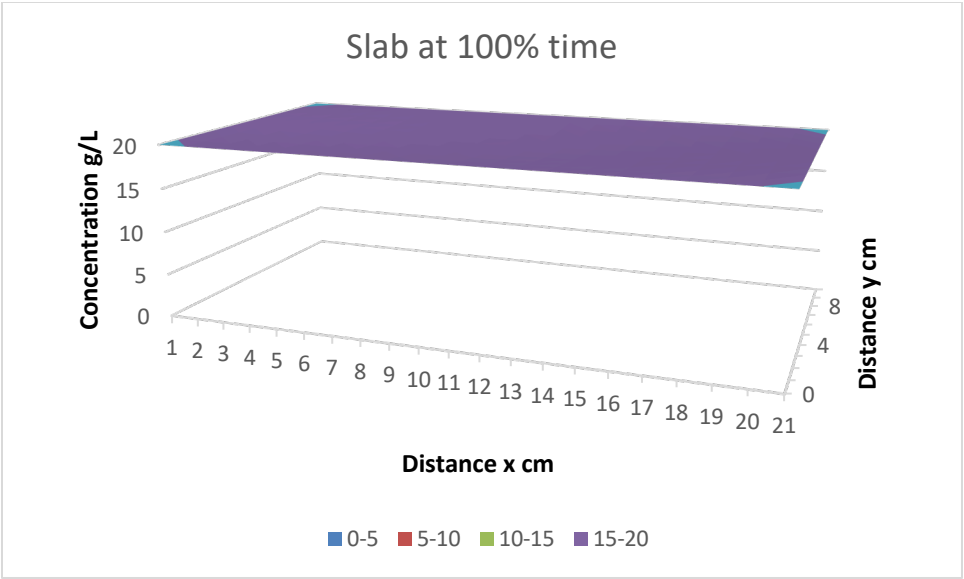

Problem 1) 3D plot of slab at initial 25% 50% 75% and final time intervals







Problem 2) How many days does it take for the center to reach 19 g/l?

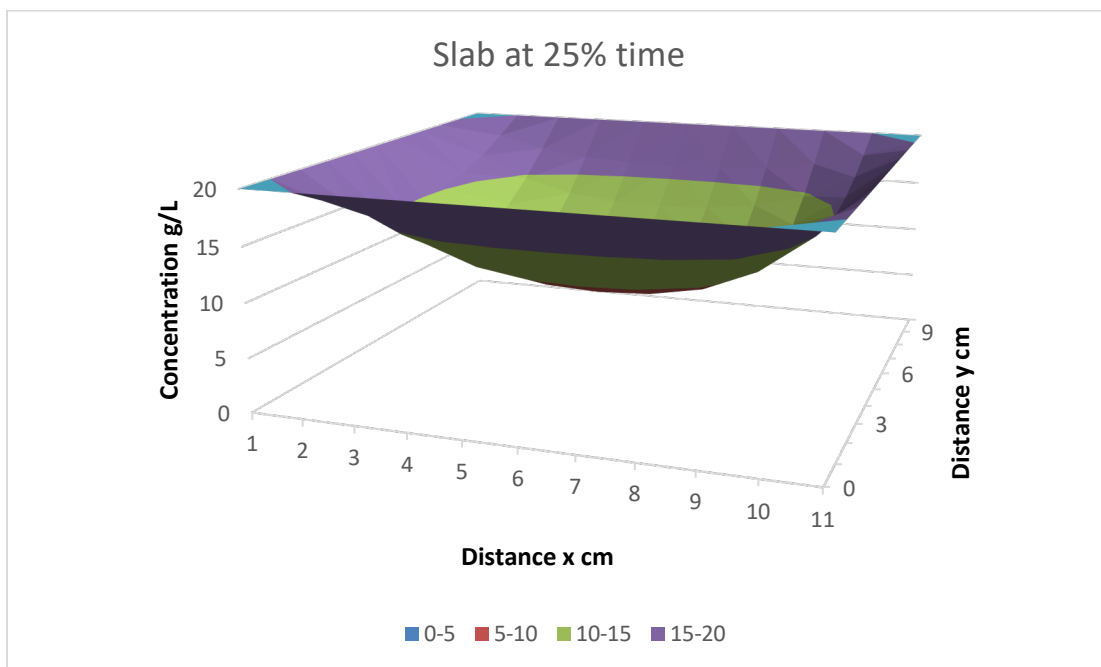
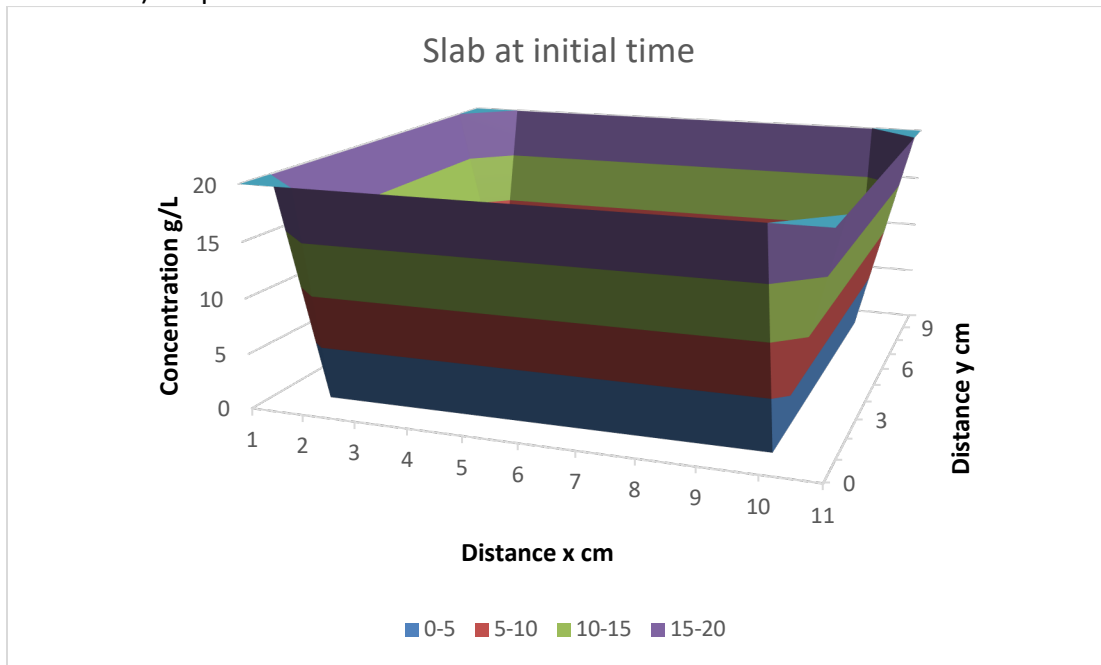
99.8 days

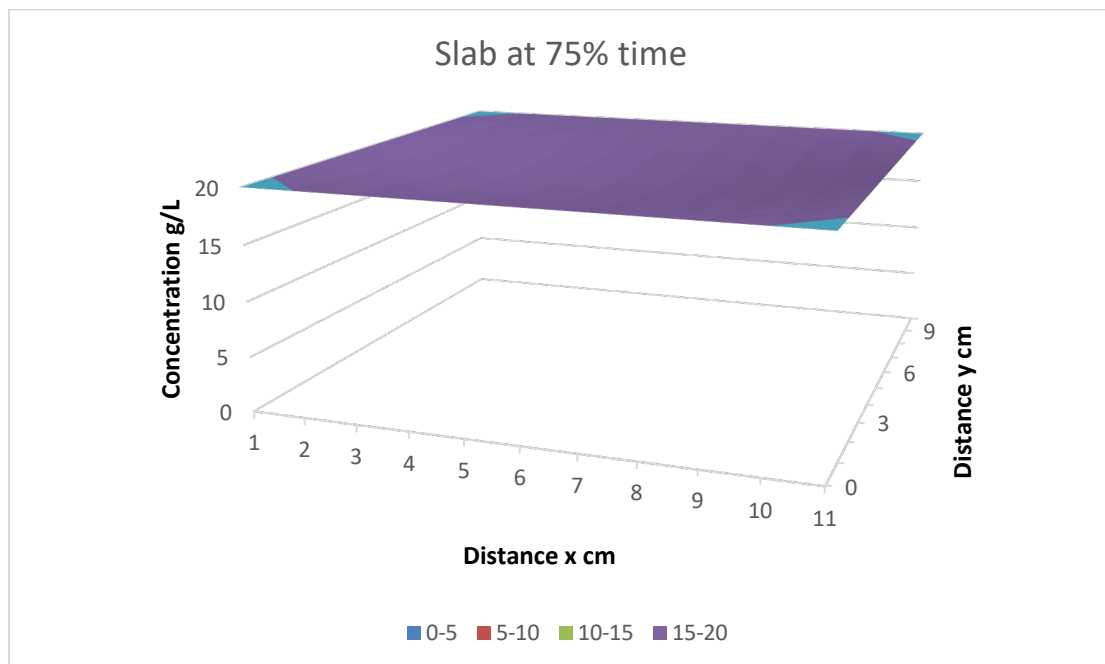
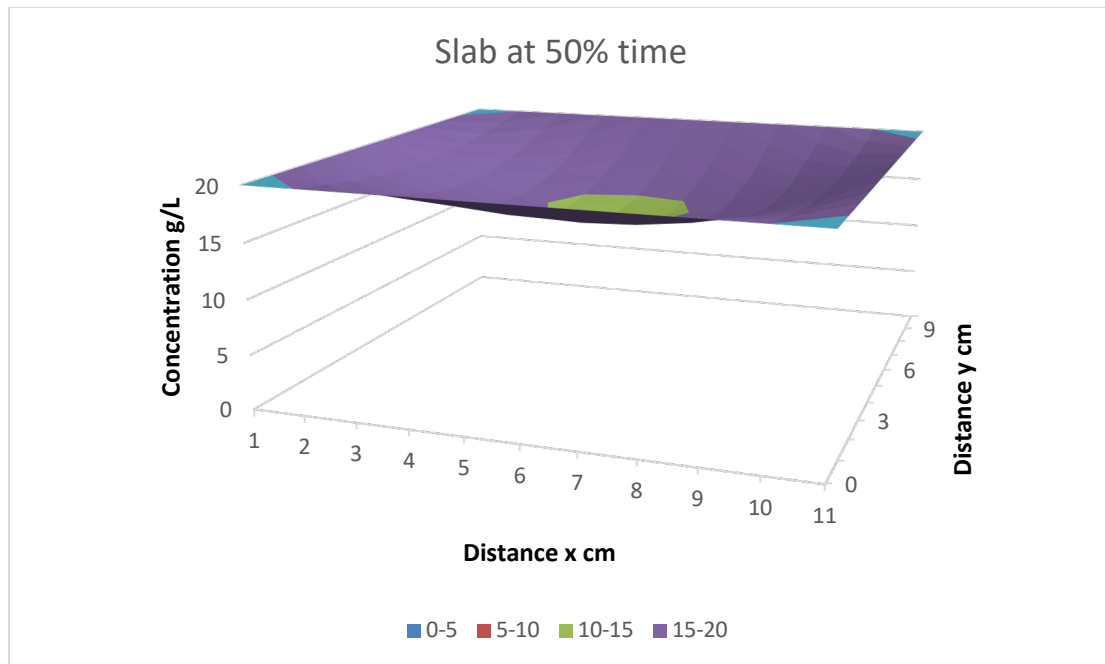
Screenshot of text file or comma delimited file with time above each agar glucose concentration.

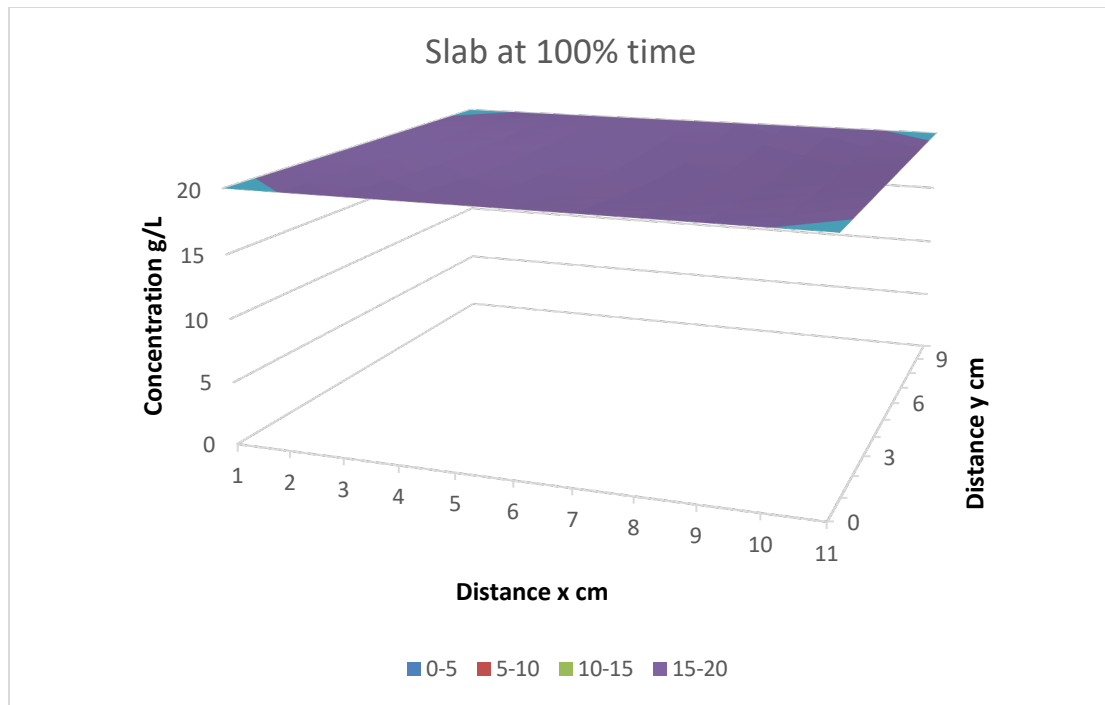
```
g > Assign7 > ≡ 2DArrayP2.txt
Problem 2
Time: 25.0
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20.0000,18.4048,17.2195,16.5474,16.2527,16.1754,16.2527,16.5474,17.2195,18.4048,20.0000
20.0000,16.9708,14.7201,13.4439,12.8843,12.7374,12.8843,13.4439,14.7201,16.9708,20.0000
20.0000,15.8393,12.7480,10.9951,10.2266,10.0248,10.2266,10.9951,12.7480,15.8393,20.0000
20.0000,15.1170,11.4891,9.4321,8.5301,8.2933,8.5301,9.4321,11.4891,15.1170,20.0000
20.0000,14.8690,11.0569,8.8954,7.9477,7.6989,7.9477,8.8954,11.0569,14.8690,20.0000
20.0000,15.1170,11.4891,9.4321,8.5301,8.2933,8.5301,9.4321,11.4891,15.1170,20.0000
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20.0000,20.0000,20.0000,20.0000,20.0000,20.0000,20.0000,20.0000,20.0000,20.0000

Time: 50.0
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20.0000,19.4292,18.9388,18.5804,18.3696,18.3009,18.3696,18.5804,18.9388,19.4292,20.0000
20.0000,18.9143,17.9815,17.2998,16.8988,16.7682,16.8988,17.2998,17.9815,18.9143,20.0000
20.0000,18.5056,17.2218,16.2836,15.7316,15.5519,15.7316,16.2836,17.2218,18.5056,20.0000
20.0000,18.2433,16.7341,15.6311,14.9822,14.7709,14.9822,15.6311,16.7341,18.2433,20.0000
20.0000,18.1529,16.5660,15.4063,14.7240,14.5019,14.7240,15.4063,16.5660,18.1529,20.0000
20.0000,18.2433,16.7341,15.6311,14.9822,14.7709,14.9822,15.6311,16.7341,18.2433,20.0000
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20.0000,19.4292,18.9388,18.5804,18.3696,18.3009,18.3696,18.5804,18.9388,19.4292,20.0000
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```

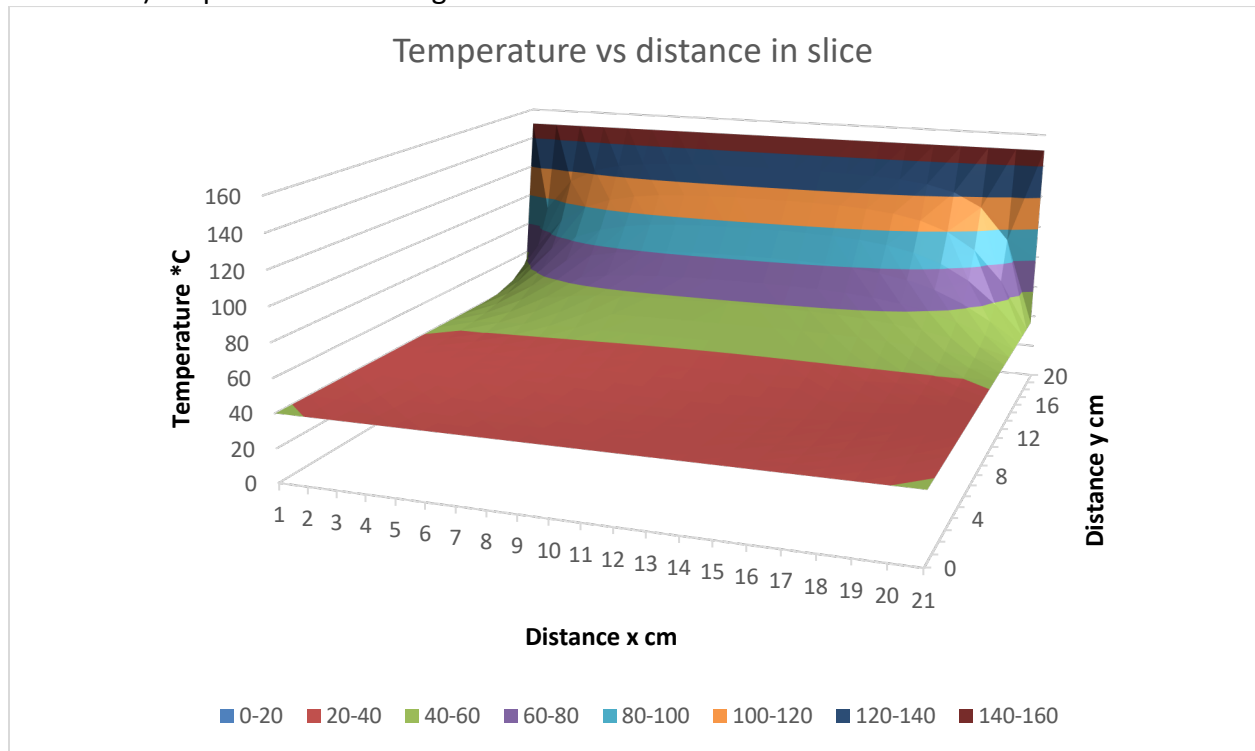
Problem 2) 3D plot of slab at initial 25% 50% 75% and final time intervals







Problem 3) 3D plot of slice through center of cube.



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Screen shot of plane through cube data file

Both left and right

[illegible]

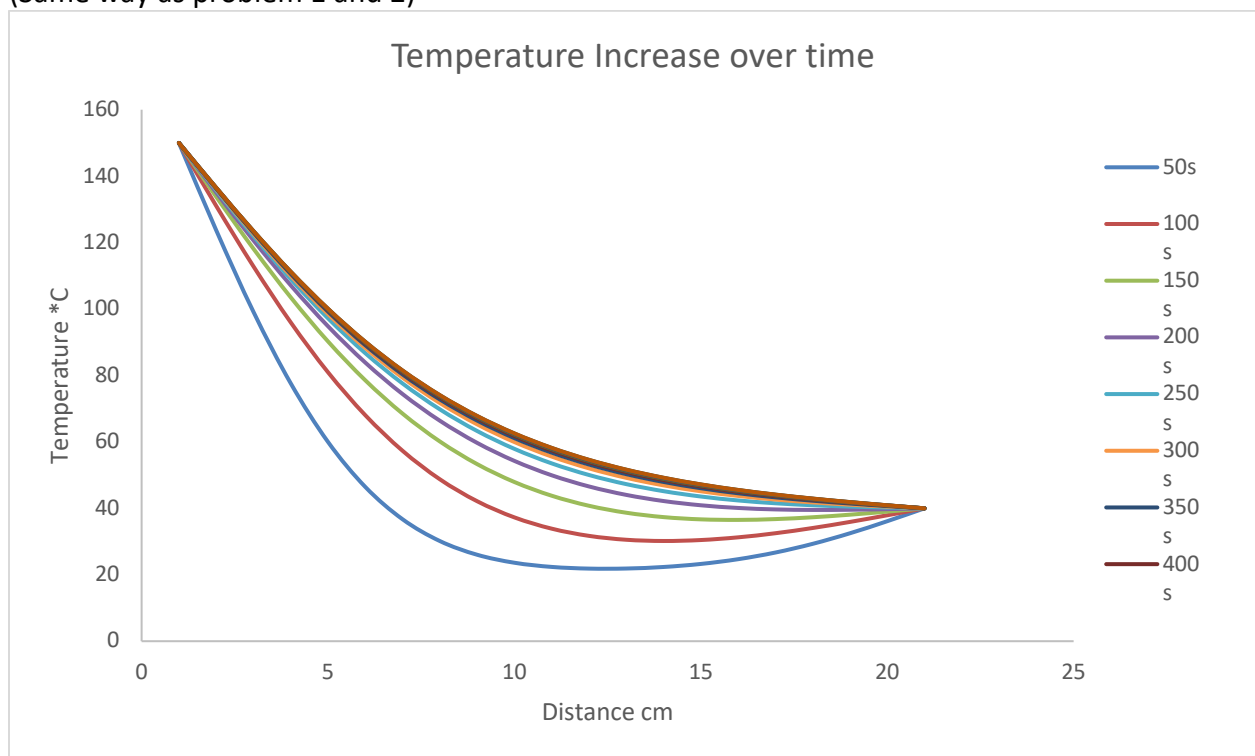
Problem 3) How long does it take for the center of the cube to reach 38°C
105

Is there an equilibrium temperature at the center? How long does it take to get within 0.1 C of this?

Yes - 571.0s

Plot the temperature profile of the cube in **ONE** of the following ways.

(Same way as problem 1 and 2)



Screen shot of data file.

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17	Problem 3a		1	2	3	4	5	...	11	...	17	18	19	20	21
18	Time:	50s	150	123.7264	99.1448	77.6224	59.9815	...	22.3613	...	26.6939	29.3092	32.4939	36.1242	40
19	Time:	100s	150	131.0526	112.8339	95.9771	80.9516	...	33.8782	...	32.504	34.0791	35.909	37.911	40
20	Time:	150s	150	133.8063	118.154	103.5135	90.2364	...	43.7963	...	36.761	37.3134	38.0889	39.0089	40
21	Time:	200s	150	135.0871	120.6571	107.127	94.804	...	49.949	...	39.6727	39.5173	39.5674	39.7509	40
22	Time:	250s	150	135.7417	121.9428	108.9982	97.1958	...	53.53	...	41.5225	40.9274	40.518	40.2293	40
23	Time:	300s	150	136.0928	122.6342	110.0086	98.4946	...	55.5856	...	42.6443	41.7873	41.1	40.5229	40
24	Time:	350s	150	136.2864	123.0158	110.5676	99.2153	...	56.7621	...	43.3072	42.2971	41.4459	40.6977	40
25	Time:	400s	150	136.3947	123.2295	110.8811	99.6202	...	57.4349	...	43.6932	42.5945	41.648	40.7999	40
26	Time:	450s	150	136.4559	123.3503	111.0583	99.8494	...	57.8196	...	43.9163	42.7666	41.765	40.8591	40
27	Time:	500s	150	136.4906	123.4189	111.1591	99.9797	...	58.0396	...	44.0446	42.8656	41.8324	40.8931	40
28	Time:	550s	150	136.5104	123.458	111.2164	100.054	...	58.1654	...	44.1182	42.9224	41.871	40.9127	40
29	Time:	571s	150	136.5159	123.4689	111.2325	100.0747	...	58.2005	...	44.1388	42.9383	41.8819	40.9182	40