

Problem 1

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f_x

	A	B	C	D	E	F	G
t	Euler y	Taylor y	Exact y	Euler Error	Taylor Error		
1	0	0	0	0	0	0	
1.1	0.1	0.11	0.105159816	0.005159816	0.004840184		
1.2	0.209917355	0.23046281	0.221242773	0.011325417	0.009220037		
1.3	0.330470558	0.362168074	0.349121132	0.018650574	0.013046942		
1.4	0.462353547	0.505931031	0.489681664	0.027328116	0.016249367		
1.5	0.606285474	0.662627407	0.643875332	0.037589857	0.018752075		
1.6	0.763041487	0.833215635	0.812752741	0.049711253	0.020462895		
1.7	0.93347503	1.018757998	0.997494129	0.064019099	0.021263869		
1.8	1.118536732	1.220442165	1.19943864	0.080901909	0.021003525		
1.9	1.319292612	1.439604435	1.420115837	0.100823225	0.019488598		
2	1.536943276	1.677755861	1.661281756	0.12433848	0.016474105		

Problem 2

	A	B	C	D	E	F	G	H
1	h	t	u1_numeric	u1_exact	u1_error	u2_numeric	u2_exact	u2_error
2	0.05	0	1.333333333	1.333333333	0	0.666666667	0.666666667	1.11E-16
3	0.05	0.05	1.721880259	1.912058635	0.190178376	-0.499599343	-0.909076587	0.409477243
4	0.05	0.1	1.726915047	1.793062585	0.066147538	-0.832597705	-1.032002453	0.199404748
5	0.05	0.15	1.617160632	1.601966763	0.015193869	-0.890372992	-0.961458713	0.07108572
6	0.05	0.2	1.481687286	1.423902396	0.057784889	-0.861042086	-0.874681025	0.01363894
7	0.05	0.25	1.348945029	1.267645618	0.081299411	-0.807504527	-0.795220771	0.012283756
8	0.05	0.3	1.2270633	1.131576522	0.095486778	-0.750340628	-0.724998568	0.025342059
9	0.05	0.35	1.117478125	1.012998556	0.104479569	-0.695885914	-0.663059627	0.032826287
10	0.05	0.4	1.01952546	0.909408587	0.110116873	-0.645731758	-0.608214207	0.03751755
11	0.05	0.45	0.931976666	0.818629532	0.113347134	-0.59993424	-0.559389247	0.040544993
12	0.05	0.5	0.853540507	0.738787838	0.114752669	-0.558092491	-0.515657674	0.042434817
13	0.05	0.55	0.783017271	0.668274657	0.114742614	-0.51970627	-0.476224748	0.043481522
14	0.05	0.6	0.719337015	0.605709648	0.113627367	-0.484290305	-0.44041076	0.043879545
15	0.05	0.65	0.661560286	0.549909409	0.111650877	-0.451407061	-0.407635338	0.043771724
16	0.05	0.7	0.608867665	0.499860252	0.109007412	-0.42067262	-0.377403824	0.043268796
17	0.05	0.75	0.560546845	0.454694739	0.105852106	-0.391754083	-0.349295514	0.042458568
18	0.05	0.8	0.515980048	0.413671476	0.102308572	-0.36436468	-0.322953523	0.041411157
19	0.05	0.85	0.474632573	0.376157714	0.098474859	-0.338258592	-0.298076048	0.040182544
20	0.05	0.9	0.436042617	0.341614348	0.094428268	-0.313226104	-0.274408835	0.038817269
21	0.05	0.95	0.399812306	0.309583005	0.090229301	-0.289089257	-0.251738684	0.037350573
22	0.05	1	0.36559829	0.279674905	0.085924924	-0.265697991	-0.229887837	0.035810154
23	0.1	0	1.333333333	1.333333333	0	0.666666667	0.666666667	1.11E-16
24	0.1	0.1	-3.052437069	1.793062585	4.845499654	8.989305343	-1.032002453	10.0213078
25	0.1	0.2	-23.84779486	1.423902396	25.27169726	51.192704	-0.874681025	52.06738503
26	0.1	0.3	-130.1652017	1.131576522	131.2967782	269.2691932	-0.724998568	269.9941917
27	0.1	0.4	-680.2314851	0.909408587	681.1408937	1399.368584	-0.608214207	1399.976798
28	0.1	0.5	-3531.299585	0.738787838	3532.038373	7258.241839	-0.515657674	7258.757497
29	0.1	0.6	-18312.79505	0.605709648	18313.40076	37634.95548	-0.44041076	37635.39589
30	0.1	0.7	-94951.33191	0.499860252	94951.83177	195131.8717	-0.377403824	195132.2491
31	0.1	0.8	-492306.4656	0.413671476	492306.8793	1011721.872	-0.322953523	1011722.195
32	0.1	0.9	-2552513.624	0.341614348	2552513.965	5245578.827	-0.274408835	5245579.101
33	0.1	1	-13234278.79	0.279674905	13234279.07	27197287.21	-0.229887837	27197287.44