ENGR130 Homework 3 **mel scott**

Exercise 10-1

Neper frequency (alpha0)	200	[rad/s]
Resonant frequency (omega0)	400	[rad/s]
Initial voltage (V0)	75	[V]
Damped frequency (omega d)	346.4	[rad/s]

Time [s]	Voltage [V]
0.0000	75.0
0.0002	71.9
0.0004	68.6
0.0006	65.1
0.0008	61.5
0.0010	57.8
0.0012	54.0
0.0014	50.1
0.0016	46.3
0.0018	42.5
0.0020	38.7

Questions	a)	69.4
	b)	82.2
	c)	61.5

ENGR130 Homework 3 **YOUR NAME HERE**

ICA 10-10

a	benzene	
b		(blank)
c	2632	
d	265	
e	43.8672	

ICA 10-11

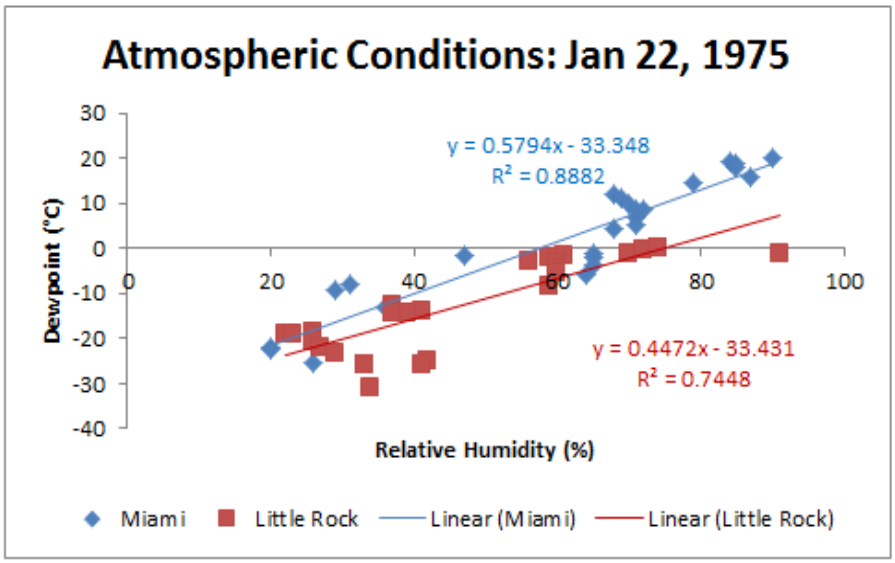
a	30	
b	1	
c	0	
d		(blank)

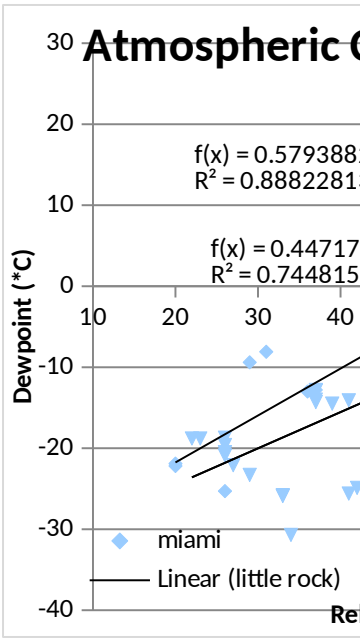
ICA 10-12

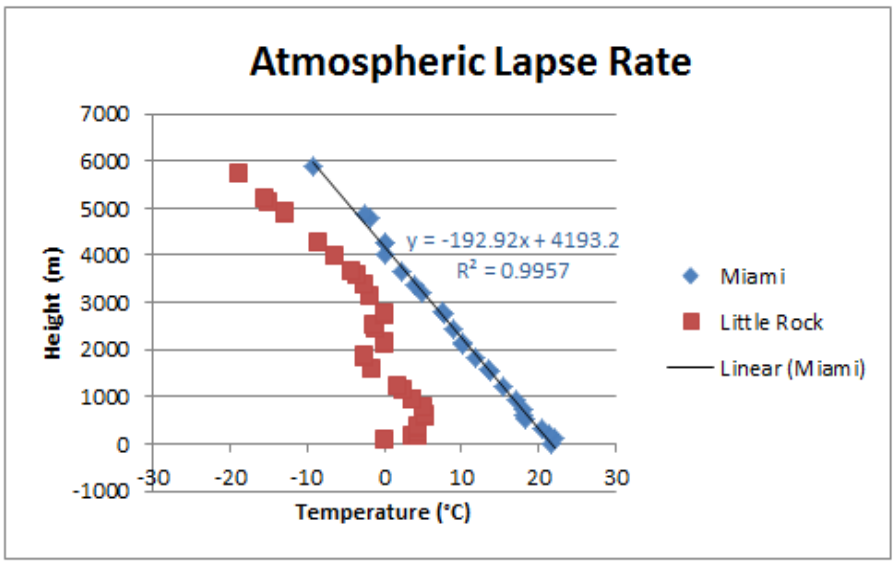
a	yes	
b	yes	
c	30	
d	10	

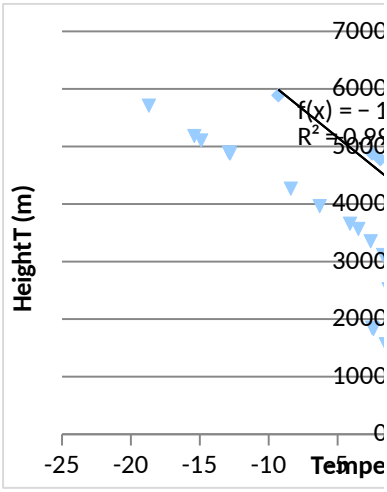
ENGR130 Homework 3 **Mel Scott**

#3 For this portion of the assignment, you will make scatterplots that are identical to those shown b
You will use the data for Miami and Little Rock that are given in the next 2 sheets.
If it is easier, you may copy the relevant data columns into this sheet in order to make your scatte





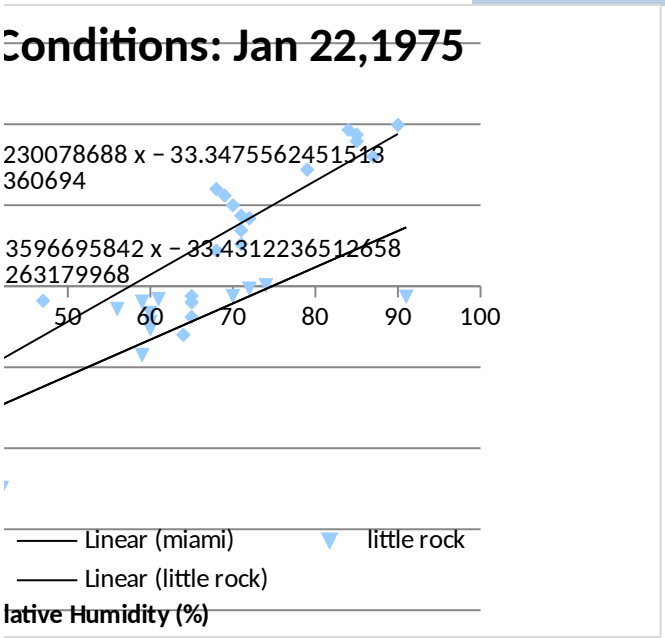


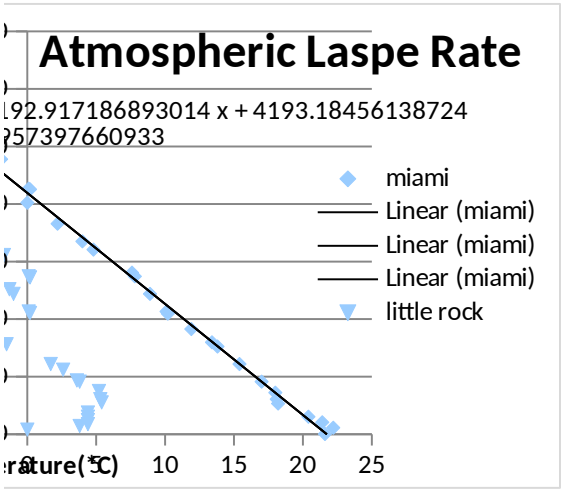


elow. Answer the questions on the last page in the shaded cells below.

erplots.

1a	miami= 0.5794, little rock= 0.4472
1b	miami= 33.348, little rock= 33.431
1c	miami= 0.8882, little rock= 0.7448
1d	Miami
2a	increase
2b	miami
2c (extra credit)	





PRES	HGHT	TEMP	DWPT	RELH	MIXR	DRCT	SKNT	THTA	THTE
hPa	m	C	C	%	g/kg	deg	knot	K	K
1024	4	21.6	19.9	90	14.5	80	6	292.8	334.1
1011	113	22.2	19.3	84	14.14	91	9	294.4	335
1000	207	21.4	18.7	85	13.76	100	11	294.6	334.1
988.9	304	20.4	17.9	85	13.22	105	13	294.5	332.6
963	533	18.2	16	87	12.01	109	15	294.5	329.1
954.5	609	18.1	14.4	79	10.91	110	15	295.2	326.8
942	723	18	12	68	9.43	110	15	296.2	323.7
921	914	17	11.2	69	9.15	110	16	297	323.9
888.6	1219	15.4	10	70	8.72	95	15	298.4	324.2
857.3	1524	13.8	8.7	71	8.3	85	12	299.8	324.5
850	1597	13.4	8.4	72	8.2	85	12	300.2	324.6
826.9	1828	11.9	6.9	71	7.61	75	9	301	323.8
801	2095	10.2	5.2	71	6.97	44	8	301.9	322.9
797.3	2133	10.1	4.4	68	6.63	40	8	302.1	322.2
768.5	2438	8.9	-1.8	47	4.37	25	7	304.1	317.8
740.8	2743	7.8	-8.1	31	2.82	30	2	306.1	315.2
735	2808	7.6	-9.4	29	2.56	38	3	306.6	314.9
700	3208	4.8	-1.2	65	5.03	85	8	307.8	323.6
687.7	3352	4	-2	65	4.81	100	12	308.4	323.6
662.3	3657	2.2	-3.8	65	4.37	105	12	309.7	323.6
633	4023	0	-6	64	3.88	126	11	311.3	323.8
615	4255	0.2	-12.8	37	2.33	139	11	314.1	321.9
614.1	4267	0.1	-13	36	2.3	140	11	314.2	321.9
576	4779	-1.9	-21.9	20	1.16	148	14	317.6	321.6
568.9	4876	-2.5	-22.2	20	1.14	150	14	317.9	322
500	5890	-9.3	-25.3	26	0.98	175	10	321.6	325.2

THTV
K

295.3
296.9
297
296.9
296.6
297.1
297.9
298.7
300
301.3
301.6
302.4
303.2
303.4
304.9
306.7
307
308.7
309.3
310.5
312
314.5
314.6
317.8
318.1
321.8

PRES	HGHT	TEMP	DWPT	RELH	MIXR	DRCT	SKNT	THTA	THTE
hPa	m	C	C	%	g/kg	deg	knot	K	K
1021	81	0	-1.3	91	3.42	320	5	271.5	280.9
1013	143	3.8	-1.2	70	3.47	328	5	275.9	285.6
1009	174	4.4	-0.3	72	3.72	331	6	276.8	287.2
1000	245	4.4	0.1	74	3.87	340	6	277.6	288.4
992.8	304	4.4	0.1	74	3.9	345	6	278.1	289.1
984	377	4.4	0.1	74	3.93	345	6	278.8	289.9
963	553	5.4	-1.6	61	3.55	345	8	281.6	291.7
956.4	609	5.3	-1.9	59	3.48	345	8	282.1	292.1
940	751	5.2	-2.8	56	3.32	345	8	283.3	292.9
921.4	914	3.8	-3.3	60	3.26	345	8	283.5	292.9
919	935	3.6	-3.4	60	3.25	344	8	283.5	292.9
898	1122	2.6	-4.4	60	3.09	335	7	284.4	293.4
887.3	1219	1.7	-5.3	60	2.92	330	7	284.4	292.9
850	1564	-1.5	-8.5	59	2.38	310	7	284.6	291.6
822.2	1828	-2.4	-14.1	41	1.58	295	11	286.3	291.1
820	1850	-2.5	-14.5	39	1.52	295	11	286.4	291.1
794	2107	0.2	-12.8	37	1.81	290	15	292	297.6
791.4	2133	0.1	-12.9	37	1.8	290	15	292.1	297.8
761.7	2438	-1	-14	37	1.71	275	13	294.1	299.5
754	2520	-1.3	-14.3	37	1.68	268	14	294.7	300
735	2724	0.2	-18.8	22	1.19	252	18	298.5	302.4
733.2	2743	0.1	-18.8	23	1.19	250	18	298.6	302.5
700	3113	-1.7	-18.7	26	1.26	240	25	300.6	304.7
679.2	3352	-2.6	-19.6	26	1.19	240	26	302.1	306.1
661	3568	-3.5	-20.5	26	1.14	247	27	303.5	307.3
653.4	3657	-4.1	-20.9	26	1.12	250	28	303.8	307.5
628.3	3962	-6.3	-22.1	27	1.04	260	31	304.8	308.3
604.1	4267	-8.4	-23.3	29	0.97	260	32	305.7	309
558.5	4876	-12.8	-25.8	33	0.84	250	42	307.6	310.5
557	4897	-12.9	-25.9	33	0.84	250	42	307.6	310.5
542	5104	-14.9	-24.9	42	0.94	246	41	307.6	310.9
536.5	5181	-15.4	-25.6	41	0.89	245	41	308	311
500	5710	-18.7	-30.7	34	0.6	240	45	310.2	312.3

THTV
K

272.1
276.5
277.5
278.2
278.8
279.5
282.2
282.7
283.9
284.1
284.1
284.9
284.9
285
286.6
286.7
292.3
292.5
294.5
295
298.7
298.8
300.8
302.3
303.7
304
304.9
305.9
307.7
307.8
307.8
308.1
310.3