MR3252: Tropical Meteorology

Homework 1

Name:			
maille.			

1. Use a Skew T-log P chart to fill in the table below.

P (mb)	T (°C)	T_d (°C)	θ (K)	$\theta_{e}(K)$	$\theta_{es}(K)$	w (g/kg)	RH (%)
	0	-5	309				
1000	28	23					
			305	335	360		
			325			6	80
750		16			370		

2. On the 1000–400 mb Skew T-log P chart, **use a <u>pencil</u>** to draw the temperature and dew point profiles for the following sounding.

PRES	HGHT	TEMP	DWPT	RELH	MIXR	DRCT	SKNT
hPa	m	С	С	8	g/kg	deg	knot
1010.0	12	21.6	18.6	83	13.54	205	2
1002.0	84	23.0	18.1	74	13.22	165	6
1000.0	102	23.8	18.9	74	13.94	155	7
995.0	146	24.4	19.8	76	14.84	155	8
977.1	305	23.4	18.6	74	13.97	155	10
966.0	405	22.8	17.8	73	13.45	162	10
943.4	610	20.9	17.1	79	13.17	175	9
925.0	781	19.4	16.5	83	12.93	165	8
910.8	914	18.2	16.1	87	12.78	155	8
898.0	1036	17.2	15.7	91	12.65	153	9
880.0	1210	17.8	11.8	68	9.97	150	10
879.0	1219	17.7	11.8	68	10.01	150	10
864.0	1367	16.4	12.5	78	10.65	173	8
856.0	1446	16.4	10.4	68	9.33	186	7
850.0	1506	15.8	10.8	72	9.66	195	6
845.0	1556	15.4	10.5	73	9.52	193	6
819.0	1821	14.0	11.8	87	10.73	180	3
818.2	1829	14.1	11.8	86	10.70	180	3
816.0	1852	14.2	11.6	84	10.62	174	3
799.0	2031	17.0	-13.0	12	1.77	130	3
789.3	2134	17.1	-13.6	11	1.70	105	3
786.0	2170	17.2	-13.8	11	1.68	108	3
761.5	2438	15.8	-10.0	16	2.36	130	2

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hPa m C C % g/kg deg knot 749.0 2579 15.0 -8.0 20 2.81 118 3 743.0 2647 14.2 1.2 41 5.65 113 3 734.5 2743 13.3 1.8 46 5.97 105 4 732.0 2772 13.0 2.0 47 608 107 4 712.0 3005 12.6 -9.4 21 2.65 124 3 700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195	PRES	HGHT	TEMP	DWPT	RELH	MIXR	DRCT	SKNT
743.0 2647 14.2 1.2 41 5.65 113 3 734.5 2743 13.3 1.8 46 5.97 105 4 732.0 2772 13.0 2.0 47 6.08 107 4 712.0 3005 12.6 -9.4 21 2.65 124 3 700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75	hPa	m	С	С	ફ	g/kg	deg	knot
734.5 2743 13.3 1.8 46 5.97 105 4 732.0 2772 13.0 2.0 47 6.08 107 4 712.0 3005 12.6 -9.4 21 2.65 124 3 700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 645.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 6 645.0 3825 7.0 -5.0 42 4.11 191 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89	749.0	2579	15.0	-8.0	20	2.81	118	3
732.0 2772 13.0 2.0 47 6.08 107 4 712.0 3005 12.6 -9.4 21 2.65 124 3 700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 632.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79	743.0	2647	14.2	1.2	41	5.65	113	3
712.0 3005 12.6 -9.4 21 2.65 124 3 700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51	734.5	2743	13.3	1.8	46	5.97	105	4
700.0 3147 12.2 -9.8 21 2.61 135 3 688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88	732.0	2772	13.0	2.0	47	6.08	107	4
688.0 3291 11.2 -8.8 24 2.87 148 3 658.2 3658 8.2 -8.8 29 3.00 180 4 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71	712.0	3005	12.6	-9.4	21	2.65	124	3
658.2 3658 8.2 -8.8 29 3.00 180 4 658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 555.0 5038 -2.9 -6.5 76 4.26 <td>700.0</td> <td>3147</td> <td>12.2</td> <td>-9.8</td> <td>21</td> <td>2.61</td> <td>135</td> <td>3</td>	700.0	3147	12.2	-9.8	21	2.61	135	3
658.0 3661 8.2 -8.8 29 3.00 180 4 645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 </td <td>688.0</td> <td>3291</td> <td>11.2</td> <td>-8.8</td> <td>24</td> <td>2.87</td> <td>148</td> <td>3</td>	688.0	3291	11.2	-8.8	24	2.87	148	3
645.0 3825 7.0 -5.0 42 4.11 191 5 640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60	658.2	3658	8.2	-8.8	29	3.00	180	4
640.0 3889 6.4 -1.6 57 5.35 195 6 635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.	658.0	3661	8.2	-8.8	29	3.00	180	4
635.0 3953 6.6 -8.4 33 3.21 199 6 632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72	645.0	3825	7.0	-5.0	42	4.11	191	5
632.0 3992 6.2 -9.8 31 2.89 202 7 616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 <t< td=""><td>640.0</td><td>3889</td><td>6.4</td><td>-1.6</td><td>57</td><td>5.35</td><td>195</td><td>6</td></t<>	640.0	3889	6.4	-1.6	57	5.35	195	6
616.0 4201 4.2 -6.8 45 3.75 216 8 611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50	635.0	3953	6.6	-8.4	33	3.21	199	6
611.0 4267 3.7 -7.7 43 3.51 220 9 594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 516.0 5613 -4.7 -9.7 68	632.0	3992	6.2	-9.8	31	2.89	202	7
594.0 4495 2.0 -11.0 38 2.79 218 10 586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 498.0 5892 -6.5 -11.5 68	616.0	4201	4.2	-6.8	45	3.75	216	8
586.0 4604 1.0 -7.0 55 3.88 217 11 567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 <td>611.0</td> <td>4267</td> <td>3.7</td> <td>-7.7</td> <td>43</td> <td>3.51</td> <td>220</td> <td>9</td>	611.0	4267	3.7	-7.7	43	3.51	220	9
567.0 4868 -1.5 -4.9 78 4.71 215 12 566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 498.0 5892 -6.5 -11.5 68 3.24 255 14 491.0 6003 -6.9 -17.9 41 </td <td>594.0</td> <td>4495</td> <td>2.0</td> <td>-11.0</td> <td>38</td> <td>2.79</td> <td>218</td> <td>10</td>	594.0	4495	2.0	-11.0	38	2.79	218	10
566.4 4877 -1.6 -5.0 78 4.69 215 12 555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 498.0 5892 -6.5 -11.3 68 3.24 255 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37<	586.0	4604	1.0	-7.0	55	3.88	217	11
555.0 5038 -2.9 -6.5 76 4.26 224 13 541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34	567.0	4868	-1.5	-4.9	78	4.71	215	12
541.0 5240 -3.9 -7.8 74 3.95 236 13 537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 3	566.4	4877	-1.6	-5.0	78	4.69	215	12
537.0 5299 -4.1 -9.1 68 3.60 239 13 532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0	555.0	5038	-2.9	-6.5	76	4.26	224	13
532.0 5372 -4.5 -8.8 72 3.72 243 14 525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 <td< td=""><td>541.0</td><td>5240</td><td>-3.9</td><td>-7.8</td><td>74</td><td>3.95</td><td>236</td><td>13</td></td<>	541.0	5240	-3.9	-7.8	74	3.95	236	13
525.0 5477 -4.1 -13.1 50 2.67 249 14 524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 450.0 6681 -10.9 -30.9 <	537.0	5299	-4.1	-9.1	68	3.60	239	13
524.4 5486 -4.1 -13.0 50 2.70 250 14 520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7	532.0	5372	-4.5	-8.8	72	3.72	243	14
520.0 5552 -4.1 -12.1 54 2.92 251 14 516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7	525.0	5477	-4.1	-13.1	50	2.67	249	14
516.0 5613 -4.7 -9.7 68 3.57 252 14 500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1	524.4	5486	-4.1	-13.0	50	2.70	250	14
500.0 5860 -6.3 -11.3 68 3.24 255 14 498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5	520.0	5552	-4.1	-12.1	54	2.92	251	14
498.0 5892 -6.5 -11.5 68 3.20 256 14 491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	516.0	5613	-4.7	-9.7	68	3.57	252	14
491.0 6003 -6.9 -17.9 41 1.92 261 13 485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	500.0	5860	-6.3	-11.3	68	3.24	255	14
485.2 6096 -7.4 -19.5 37 1.69 265 13 481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	498.0	5892	-6.5	-11.5	68	3.20	256	14
481.0 6164 -7.7 -20.7 34 1.54 262 13 475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	491.0	6003	-6.9	-17.9	41	1.92	261	13
475.0 6262 -8.1 -30.1 15 0.66 257 13 466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	485.2	6096	-7.4	-19.5	37	1.69	265	13
466.6 6401 -9.2 -26.0 24 0.99 250 13 459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	481.0	6164	-7.7	-20.7	34	1.54	262	13
459.0 6528 -10.3 -22.3 37 1.40 252 14 450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	475.0	6262	-8.1	-30.1	15	0.66	257	13
450.0 6681 -10.9 -30.9 18 0.65 254 14 437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	466.6	6401	-9.2	-26.0	24	0.99	250	13
437.0 6907 -12.7 -22.7 43 1.42 256 16 433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	459.0	6528	-10.3	-22.3	37	1.40	252	14
433.0 6977 -13.1 -27.1 30 0.96 257 16 410.0 7393 -15.5 -26.5 38 1.08 263 18	450.0	6681	-10.9	-30.9	18	0.65	254	14
410.0 7393 -15.5 -26.5 38 1.08 263 18	437.0	6907	-12.7	-22.7	43	1.42	256	16
410.0 7393 -15.5 -26.5 38 1.08 263 18	433.0	6977	-13.1	-27.1	30	0.96	257	16
	410.0		-15.5	-26.5	38			18
	400.0	7580	-16.3	-29.3	32	0.85	265	19

MR3252: Tropical Meteorology Homework 1

3.	Assess the stability of the following layers. For each layer, give a brief explanation in the form of temperatures or potential temperatures at the bottom and top of each layer. Additionally, out of the layers shown below, circle the one that is most unstable.
	810–790 mb:
	950–900 mb:
	475–400 mb:
	750–500 mb:
	Surface to 1000 mb:
4.	What is the approximate pressure level above which no cumuliform clouds will penetrate? How can you tell, and what does this tell you about vertical motion above this level?
5.	What is the pressure at the 0°C level?
6.	Above the answer you gave to Question 4, at approximately what level would one most likely find cloud?