SUMMARY PAGE

Question 6.2 Part 1:	Based on a CUSUM approach of looking at individual dates over time, the "unofficial summer end" is somewhere in mid-late September. September 19 is a reasonable inflection point for the end of summer.
Question 6.2 Part 2:	Based on a CUSUM approach of the total temperatures through summer overall, there is no firm data showing Atlanta's summer climate has gotten warmer. There seems to be a spike in heat in the early 2010's, but it is not definitive whether this is truly an increase as the summer's cool down to more normal temperatures starting in 2013. I would classify this spike as a normal swing in temperature, but I suppose that is up for interpretation.

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column8
DAY	1996	1997	1998	1999	2000	2001	2002
1-Jul	98	86	91	84	89	84	90
2-Jul	97	90	88	82	91	87	90
3-Jul	97	93	91	87	93	87	87
4-Jul	90	91	91	88	95	84	89
5-Jul	89	84	91	90	96	86	93
6-Jul	93	84	89	91	96	87	93
7-Jul	93	75	93	82	96	87	89
8-Jul	91	87	95	86	91	89	89
9-Jul	93	84	95	87	96	91	90
10-Jul	93	87	91	87	99	87	91
11-Jul	90	84	91	82	96	90	84
12-Jul	91	88	86	77	93	90	77
13-Jul	93	86	88	73	91	86	82
14-Jul	93	90	87	81	93	82	88
15-Jul	82	91	91	81	93	82	91
16-Jul	91	91	87	86	93	84	93
17-Jul	96	89	90	82	91	87	93
18-Jul	95	89	91	87	97	88	93
19-Jul	96	89	95	88	100	90	93
20-Jul	99	90	91	90	99	87	91
21-Jul	91	89	91	90	93	84	95
22-Jul	95	84	89	91	96	87	91
23-Jul	91	87	91	93	87	90	89
24-Jul	93	88	91	93	82	84	87
25-Jul	84	89	86	91	75	82	84
26-Jul	84	89	88	93	82	88	86
27-Jul	82	91	80	93	88	90	89
28-Jul	79	91	88	93	91	84	91
29-Jul	90	89	89	93	89	89	91
30-Jul	91	88	90	97	87	89	88
31-Jul	87	72	86	99	86	87	90
1-Aug	86	80	86	96	86	84	93
2-Aug	90	84	82	93	81	84	91
3-Aug	84	88	84	88	84	84	91
4-Aug	91	89	86	89	88	86	91
5-Aug	93	88	90	91	91	88	93
6-Aug	88	84	89	93	91	84	97
7-Aug	91	84	89	93	91	86	87
8-Aug	84	80	86	93	91	88	87
9-Aug	90	73	82	91	96	87	86
10-Aug	89	80	87	90	95	88	88
11-Aug	88	86	88	96	89	86	89
12-Aug	86	88	84	98	89	86	91

13-Aug	84	88	86	97	89	81	91
14-Aug	86	87	80	98	89	87	89
15-Aug	89	88	82	93	94	84	88
16-Aug	90	91	86	93	97	90	90
17-Aug	91	91	84	96	99	91	91
18-Aug	91	89	87	98	101	91	93
19-Aug	90	89	90	98	101	87	91
20-Aug	89	88	79	89	97	86	93
21-Aug	90	82	84	91	87	88	93
22-Aug	91	79	87	91	86	90	91
23-Aug	91	81	87	90	88	88	95
24-Aug	91	82	88	80	92	93	93
25-Aug	84	84	90	82	92	90	91
26-Aug	88	87	91	89	90	91	88
27-Aug	84	90	89	88	90	91	84
28-Aug	86	90	90	90	92	81	82
29-Aug	88	91	93	91	92	86	82
30-Aug	84	91	93	91	88	81	78
31-Aug	82	88	91	84	87	82	77
1-Sep	80	88	87	88	79	80	84
2-Sep	73	91	84	91	81	75	84
3-Sep	87	93	77	84	82	73	89
4-Sep	84	81	90	93	87	81	95
5-Sep	87	81	91	96	81	90	93
6-Sep	89	82	89	96	66	88	91
7-Sep	89	86	90	91	66	87	88
8-Sep	89	88	89	91	75	86	87
9-Sep	91	84	79	77	80	86	91
10-Sep	84	80	78	87	82	89	95
11-Sep	86	82	81	87	84	87	95
12-Sep	88	86	84	87	86	84	90
13-Sep	78	87	89	86	87	84	75
14-Sep	79	87	87	87	86	86	78
15-Sep	86	88	87	89	80	77	91
16-Sep	82	88	88	81	75	77	88
17-Sep	82	90	87	81	73	81	86
18-Sep	78	88	82	82	73	81	81
19-Sep	79	91	80	79	84	82	80
20-Sep	79	95	82	68	87	84	86
21-Sep	78	89	82	79	77	86	84
22-Sep	81	70	88	72	73	87	77
23-Sep	84	80	84	75	81	88	82
24-Sep	84	82	81	78	84	69	73
25-Sep	87	66	82	81	82	66	69
26-Sep	84	70	84	82	68	72	75
27-Sep	79	64	87	78	71	75	75
28-Sep	75	68	80	80	75	78	79

29-Sep	72	77	75	77	73	71	73
30-Sep	64	86	75	71	75	71	79
1-Oct	66	75	86	73	77	75	82
2-Oct	72	73	78	75	79	80	84
3-Oct	84	75	77	84	82	81	84
4-Oct	70	78	82	71	81	80	82
5-Oct	66	81	82	73	82	79	87
6-Oct	64	82	73	71	73	70	86
7-Oct	60	82	82	73	66	68	80
8-Oct	78	82	69	73	55	79	71
9-Oct	70	80	72	72	55	66	66
10-Oct	72	82	73	72	64	73	70
11-Oct	69	82	78	73	71	75	78
12-Oct	69	79	78	70	73	78	84
13-Oct	73	80	78	64	75	78	79
14-Oct	79	68	75	75	75	75	68
15-Oct	81	63	79	73	77	75	57
16-Oct	80	57	78	77	80	62	66
17-Oct	82	66	77	80	80	60	64
18-Oct	66	64	78	71	80	64	68
19-Oct	63	69	82	66	73	71	71
20-Oct	68	70	75	60	73	75	73
21-Oct	79	70	73	64	75	79	71
22-Oct	81	62	63	73	79	80	64
23-Oct	69	63	63	57	75	81	59
24-Oct	73	62	72	59	75	79	68
25-Oct	73	75	75	64	78	73	60
26-Oct	75	71	79	69	75	64	68
27-Oct	75	57	79	75	78	51	69
28-Oct	81	55	79	73	80	55	75
29-Oct	82	64	78	72	75	63	75
30-Oct	82	66	82	75	77	72	68
31-Oct	81	60	79	75	78	71	60

Column9	Column10	Column11	Column12	Column13	Column14	Column15	Column16
2003	2004	2005	2006	2007	2008	2009	2010
73	82	91	93	95	85	95	87
81	81	89	93	85	87	90	84
87	86	86	93	82	91	89	83
86	88	86	91	86	90	91	85
80	90	89	90	88	88	80	88
84	90	82	81	87	82	87	89
87	89	76	80	82	88	86	94
90	87	88	82	82	90	82	97
89	88	89	84	89	89	84	96
84	89	78	84	86	87	84	90
84	90	83	90	85	89	86	93
86	89	86	91	87	93	90	90
87	91	84	91	86	85	84	91
84	91	87	91	84	88	89	91
86	84	84	91	81	89	89	94
88	84	85	91	86	89	90	89
88	84	89	93	89	88	88	87
88	87	90	93	89	90	82	83
88	84	89	96	88	91	80	90
88	88	89	93	86	94	82	91
89	89	90	93	86	95	86	94
86	89	91	91	79	92	84	95
81	93	91	86	82	87	87	97
82	95	90	87	87	88	88	94
84	89	92	88	87	89	90	95
87	87	94	93	87	87	92	95
87	84	92	95	90	90	90	93
89	89	90	96	89	93	89	90
88	87	83	91	87	92	85	94
84	89	78	91	92	90	82	95
88	90	84	94	90	88	85	95
84	91	82	95	92	89	89	96
84	90	86	95	92	92	83	84
84	91	88	97	94	91	90	92
82	91	91	98	97	91	92	95
84	90	88	96	96	92	92	93
82	84	86	89	98	94	89	93
84	81	80	97	98	90	91	91
84	82	82	96	100	86	92	93
86	84	85	95	103	85	93	94
87	75	83	96	103	85	93	94
84	82	87	88	100	88	95	95
81	80	88	84	90	81	86	95

87	77	86	81	100	81	90	96
89	82	90	87	99	84	90	89
90	82	92	86	102	87	90	90
86	84	89	89	101	86	88	90
89	86	90	86	101	85	87	91
90	86	90	88	97	86	88	93
90	89	89	88	95	90	90	92
87	88	92	93	96	90	88	93
88	82	94	91	99	85	88	93
88	84	93	88	104	82	85	94
90	84	87	87	98	78	81	93
89	87	85	83	95	83	86	90
88	82	84	85	94	78	87	89
89	86	84	88	92	83	90	90
90	88	86	88	88	80	83	89
91	90	86	90	88	86	75	87
89	87	85	90	89	89	86	84
88	88	85	88	89	89	79	85
89	87	85	80	86	88	79	89
88	82	85	85	84	81	71	90
86	80	88	86	83	85	78	91
87	81	87	85	88	83	79	92
87	82	85	88	91	85	83	84
84	84	81	83	89	88	83	85
73	81	81	85	85	87	85	90
75	86	83	80	86	89	84	91
81	73	85	83	88	90	87	93
82	84	86	83	89	88	84	92
79	84	84	85	89	87	80	94
80	84	84	84	89	83	75	96
81	81	86	82	86	87	81	89
84	79	88	70	85	86	80	86
82	79	88	80	81	88	82	91
82	73	91	82	82	79	79	91
81	75	88	83	76	80	82	89
81	80	86	85	78	69	73	95
81	79	88	85	79	82	80	93
84	78	90	79	82	81	74	92
87	73	90	73	81	79	81	96
82	75	90	75	78	75	79	95
75	80	86	82	86	84	84	92
81	84	87	86	83	82	83	91
80	82	88	84	89	78	85	88
82	81	85	75	87	82	87	93
82	79	77	78	84	80	85	76
82	72	86	79	85	77	80	81
73	78	85	81	85	86	83	76

66	78	85	70	81	86	72	79
71	80	82	75	79	86	74	76
72	82	83	83	80	74	76	79
68	82	85	81	82	74	75	78
66	80	83	82	77	80	76	68
77	81	85	84	80	83	74	67
78	80	81	86	81	83	62	70
75	75	72	76	82	82	71	73
73	75	72	72	83	82	79	81
73	73	73	72	83	72	80	82
73	71	70	79	81	75	85	85
73	71	77	80	81	77	74	86
66	77	82	80	67	78	77	86
78	73	74	71	72	77	66	80
78	64	77	62	74	77	73	80
78	63	78	69	78	80	66	73
69	62	79	70	78	81	61	78
72	71	76	59	76	83	61	76
68	75	75	71	82	69	51	80
70	73	81	77	77	67	55	78
75	68	83	76	76	65	61	82
78	71	83	69	75	66	68	77
84	73	80	69	78	72	71	80
78	73	67	70	72	68	74	78
78	70	70	53	81	62	72	76
73	73	56	56	59	54	69	81
73	78	54	55	61	67	65	76
68	79	61	62	68	70	65	85
64	81	63	66	67	59	60	76
57	78	62	63	70	50	71	74
70	75	64	72	62	59	75	68
77	78	69	73	67	65	66	71
75	82	70	68	71	67	69	75

Column17	Column18	Column19	Column20	Column21	Column22	Column23	1996
2011	2012	2013	2014	2015	Average		Value - Mean
92	105	82	90	85	**88.85**		**9.15**
94	93	85	93	87	**88.35**		**8.65**
95	99	76	87	79	**88.4**		**8.6**
92	98	77	84	85	**88.35**		**1.65**
90	100	83	86	84	**88.25**		**0.75**
90	98	83	87	84	**87.85**		**5.15**
94	93	79	89	90	**87.1**		**5.9**
94	95	88	90	90	**89.15**		**1.85**
91	97	88	90	91	**90.05**		**2.95**
92	95	87	87	93	**88.55**		**4.45**
95	90	80	85	92	**87.95**		**2.05**
95	84	87	90	93	**88.15**		**2.85**
97	90	78	89	92	**87.2**		**5.8**
90	90	85	90	90	**88.2**		**4.8**
80	90	86	86	89	**87**		**-5**
85	92	87	83	88	**88.1**		**2.9**
87	93	91	86	93	**89.2**		**6.8**
89	93	87	82	92	**89.25**		**5.75**
94	91	90	85	91	**90.4**		**5.6**
91	84	86	76	93	**89.4**		**9.6**
92	90	87	82	93	**89.95**		**1.05**
94	95	85	83	92	**89.45**		**5.55**
92	97	84	88	88	**89.05**		**1.95**
92	97	86	87	91	**89.1**		**3.9**
90	98	89	88	90	**88**		**-4**
94	98	86	89	91	**89.5**		**-5.5**
94	97	82	92	92	**89.55**		**-7.55**
90	97	86	90	94	**89.95**		**-10.95**
93	94	86	82	93	**89.25**		**0.75**
96	96	90	84	94	**89.55**		**1.45**
96	88	80	85	93	**88.15**		**-1.15**
91	94	87	81	89	**88.55**		**-2.55**
96	99	89	84	94	**88.65**		**1.35**
97	94	88	88	94	**89.55**		**-5.55**
85	87	90	90	97	**90.3**		**0.7**
96	90	88	89	95	**91.15**		**1.85**
93	86	88	92	88	**89.4**		**-1.4**
93	84	86	95	88	**88.95**		**2.05**
94	92	83	90	92	**88.75**		**-4.75**
91	88	89	89	93	**89**		**1**
95	87	90	86	94	**89.25**		**-0.25**
94	85	90	83	91	**89.2**		**-1.2**
95	88	90	88	90	**87.9**		**-1.9**

95	91	89	84	89	**88.1**	**-4.1**
94	88	83	85	90	**88.3**	**-2.3**
88	85	73	87	90	**88**	**1**
90	91	67	88	90	**88.8**	**1.2**
92	87	66	89	89	**89.05**	**1.95**
94	87	77	89	88	**90.15**	**0.85**
96	84	82	86	89	**90.3**	**-0.3**
93	84	84	89	88	**89.3**	**-0.3**
94	88	84	92	89	**89.1**	**0.9**
98	84	88	93	92	**89.4**	**1.6**
92	88	90	93	87	**88.4**	**2.6**
93	86	84	88	89	**87.85**	**3.15**
95	85	82	84	84	**86.5**	**-2.5**
99	90	82	86	86	**88.45**	**-0.45**
95	90	86	88	85	**87.6**	**-3.6**
95	80	90	91	83	**87.15**	**-1.15**
93	86	92	92	81	**88.3**	**-0.3**
90	80	87	88	74	**85.8**	**-1.8**
92	89	90	89	84	**85.9**	**-3.9**
95	91	90	90	87	**85.25**	**-5.25**
96	89	84	90	90	**85.25**	**-12.25**
95	85	90	92	89	**85.9**	**1.1**
80	77	89	82	92	**85.8**	**-1.8**
78	85	89	89	87	**86.2**	**0.8**
75	85	88	91	85	**84.6**	**4.4**
69	92	88	90	85	**84.75**	**4.25**
73	88	91	84	84	**85.25**	**3.75**
81	83	90	84	87	**85.05**	**5.95**
84	84	89	86	85	**85.25**	**-1.25**
86	83	89	90	86	**85.55**	**0.45**
87	81	90	92	78	**85.3**	**2.7**
89	81	87	86	75	**83.1**	**-5.1**
92	83	82	78	77	**83.65**	**-4.65**
86	87	84	80	80	**83.7**	**2.3**
72	86	89	86	79	**82.25**	**-0.25**
79	83	79	86	83	**81.85**	**0.15**
77	79	78	85	83	**81.7**	**-3.7**
77	81	84	84	87	**82.4**	**-3.4**
82	79	86	83	89	**83**	**-4**
86	85	73	87	77	**81.6**	**-3.6**
80	87	82	82	76	**81.2**	**-0.2**
83	81	82	77	81	**82.75**	**1.25**
82	78	71	78	74	**80.4**	**3.6**
88	82	67	77	67	**79.3**	**7.7**
86	86	78	74	71	**78.55**	**5.45**
84	88	79	78	71	**78.55**	**0.45**
79	86	77	74	75	**78.65**	**-3.65**

84	84	76	71	77	**76.35**	**-4.35**
78	72	77	84	85	**77**	**-13**
65	75	82	86	71	**77.1**	**-11.1**
68	72	82	85	66	**76.95**	**-4.95**
75	74	82	78	66	**77.7**	**6.3**
80	82	85	65	70	**77.85**	**-7.85**
83	82	84	71	73	**78.2**	**-12.2**
81	83	84	78	76	**76.35**	**-12.35**
79	68	74	82	81	**75.6**	**-15.6**
78	63	72	86	82	**74.8**	**3.2**
72	70	76	86	81	**74.25**	**-4.25**
68	73	80	86	71	**75.15**	**-3.15**
65	75	79	86	73	**75.85**	**-6.85**
73	79	81	85	76	**75.8**	**-6.8**
74	75	82	85	81	**75.45**	**-2.45**
77	77	77	75	78	**74.2**	**4.8**
80	77	68	69	81	**72.9**	**8.1**
84	74	74	70	77	**72.65**	**7.35**
85	75	72	80	70	**73.1**	**8.9**
80	74	73	76	66	**71.9**	**-5.9**
67	73	63	73	64	**71.05**	**-8.05**
59	71	70	73	71	**71.25**	**-3.25**
63	76	72	77	76	**74.1**	**4.9**
68	79	69	70	79	**72.35**	**8.65**
70	78	63	72	81	**69.65**	**-0.65**
73	79	66	74	76	**68.85**	**4.15**
76	80	56	77	71	**69.35**	**3.65**
77	80	61	84	67	**71.4**	**3.6**
79	70	69	84	56	**68.9**	**6.1**
74	56	64	77	78	**68.6**	**12.4**
59	56	75	73	70	**69.35**	**12.65**
61	56	78	68	70	**71.05**	**10.95**
65	65	74	63	62	**70.5**	**10.5**

1996 Average of Mean - Value (CUSUM)

46.3

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean
-2.85	2.15	-4.85	0.15	-4.85	1.15	-15.85	-6.85	2.15	4.15
1.65	-0.35	-6.35	2.65	-1.35	1.65	-7.35	-7.35	0.65	4.65
4.6	2.6	-1.4	4.6	-1.4	-1.4	-1.4	-2.4	-2.4	4.6
2.65	2.65	-0.35	6.65	-4.35	0.65	-2.35	-0.35	-2.35	2.65
-4.25	2.75	1.75	7.75	-2.25	4.75	-8.25	1.75	0.75	1.75
-3.85	1.15	3.15	8.15	-0.85	5.15	-3.85	2.15	-5.85	-6.85
-12.1	5.9	-5.1	8.9	-0.1	1.9	-0.1	1.9	-11.1	-7.1
-2.15	5.85	-3.15	1.85	-0.15	-0.15	0.85	-2.15	-1.15	-7.15
-6.05	4.95	-3.05	5.95	0.95	-0.05	-1.05	-2.05	-1.05	-6.05
-1.55	2.45	-1.55	10.45	-1.55	2.45	-4.55	0.45	-10.55	-4.55
-3.95	3.05	-5.95	8.05	2.05	-3.95	-3.95	2.05	-4.95	2.05
-0.15	-2.15	-11.15	4.85	1.85	-11.15	-2.15	0.85	-2.15	2.85
-1.2	0.8	-14.2	3.8	-1.2	-5.2	-0.2	3.8	-3.2	3.8
1.8	-1.2	-7.2	4.8	-6.2	-0.2	-4.2	2.8	-1.2	2.8
4	4	-6	6	-5	4	-1	-3	-3	4
2.9	-1.1	-2.1	4.9	-4.1	4.9	-0.1	-4.1	-3.1	2.9
-0.2	0.8	-7.2	1.8	-2.2	3.8	-1.2	-5.2	-0.2	3.8
-0.25	1.75	-2.25	7.75	-1.25	3.75	-1.25	-2.25	0.75	3.75
-1.4	4.6	-2.4	9.6	-0.4	2.6	-2.4	-6.4	-1.4	5.6
0.6	1.6	0.6	9.6	-2.4	1.6	-1.4	-1.4	-0.4	3.6
-0.95	1.05	0.05	3.05	-5.95	5.05	-0.95	-0.95	0.05	3.05
-5.45	-0.45	1.55	6.55	-2.45	1.55	-3.45	-0.45	1.55	1.55
-2.05	1.95	3.95	-2.05	0.95	-0.05	-8.05	3.95	1.95	-3.05
-1.1	1.9	3.9	-7.1	-5.1	-2.1	-7.1	5.9	0.9	-2.1
1	-2	3	-13	-6	-4	-4	1	4	0
-0.5	-1.5	3.5	-7.5	-1.5	-3.5	-2.5	-2.5	4.5	3.5
1.45	-9.55	3.45	-1.55	0.45	-0.55	-2.55	-5.55	2.45	5.45
1.05	-1.95	3.05	1.05	-5.95	1.05	-0.95	-0.95	0.05	6.05
-0.25	-0.25	3.75	-0.25	-0.25	1.75	-1.25	-2.25	-6.25	1.75
-1.55	0.45	7.45	-2.55	-0.55	-1.55	-5.55	-0.55	-11.55	1.45
-16.15	-2.15	10.85	-2.15	-1.15	1.85	-0.15	1.85	-4.15	5.85
-8.55	-2.55	7.45	-2.55	-4.55	4.45	-4.55	2.45	-6.55	6.45
-4.65	-6.65	4.35	-7.65	-4.65	2.35	-4.65	1.35	-2.65	6.35
-1.55	-5.55	-1.55	-5.55	-5.55	1.45	-5.55	1.45	-1.55	7.45
-1.3	-4.3	-1.3	-2.3	-4.3	0.7	-8.3	0.7	0.7	7.7
-3.15	-1.15	-0.15	-0.15	-3.15	1.85	-7.15	-1.15	-3.15	4.85
-5.4	-0.4	3.6	1.6	-5.4	7.6	-7.4	-5.4	-3.4	-0.4
-4.95	0.05	4.05	2.05	-2.95	-1.95	-4.95	-7.95	-8.95	8.05
-8.75	-2.75	4.25	2.25	-0.75	-1.75	-4.75	-6.75	-6.75	7.25
-16	-7	2	7	-2	-3	-3	-5	-4	6
-9.25	-2.25	0.75	5.75	-1.25	-1.25	-2.25	-14.25	-6.25	6.75
-3.2	-1.2	6.8	-0.2	-3.2	-0.2	-5.2	-7.2	-2.2	-1.2
0.1	-3.9	10.1	1.1	-1.9	3.1	-6.9	-7.9	0.1	-3.9

-0.1	-2.1	8.9	0.9	-7.1	2.9	-1.1	-11.1	-2.1	-7.1
-1.3	-8.3	9.7	0.7	-1.3	0.7	0.7	-6.3	1.7	-1.3
0	-6	5	6	-4	0	2	-6	4	-2
2.2	-2.8	4.2	8.2	1.2	1.2	-2.8	-4.8	0.2	0.2
1.95	-5.05	6.95	9.95	1.95	1.95	-0.05	-3.05	0.95	-3.05
-1.15	-3.15	7.85	10.85	0.85	2.85	-0.15	-4.15	-0.15	-2.15
-1.3	-0.3	7.7	10.7	-3.3	0.7	-0.3	-1.3	-1.3	-2.3
-1.3	-10.3	-0.3	7.7	-3.3	3.7	-2.3	-1.3	2.7	3.7
-7.1	-5.1	1.9	-2.1	-1.1	3.9	-1.1	-7.1	4.9	1.9
-10.4	-2.4	1.6	-3.4	0.6	1.6	-1.4	-5.4	3.6	-1.4
-7.4	-1.4	1.6	-0.4	-0.4	6.6	1.6	-4.4	-1.4	-1.4
-5.85	0.15	-7.85	4.15	5.15	5.15	1.15	-0.85	-2.85	-4.85
-2.5	3.5	-4.5	5.5	3.5	4.5	1.5	-4.5	-2.5	-1.5
-1.45	2.55	0.55	1.55	2.55	-0.45	0.55	-2.45	-4.45	-0.45
2.4	1.4	0.4	2.4	3.4	-3.6	2.4	0.4	-1.6	0.4
2.85	2.85	2.85	4.85	-6.15	-5.15	3.85	2.85	-1.15	2.85
2.7	4.7	2.7	3.7	-2.3	-6.3	0.7	-1.3	-3.3	1.7
5.2	7.2	5.2	2.2	-4.8	-7.8	2.2	2.2	-0.8	2.2
2.1	5.1	-1.9	1.1	-3.9	-8.9	3.1	1.1	-0.9	-5.9
2.75	1.75	2.75	-6.25	-5.25	-1.25	2.75	-3.25	-0.25	-0.25
5.75	-1.25	5.75	-4.25	-10.25	-1.25	0.75	-5.25	2.75	0.75
7.1	-8.9	-1.9	-3.9	-12.9	3.1	1.1	-4.9	1.1	-0.9
-4.8	4.2	7.2	1.2	-4.8	9.2	1.2	-3.8	-0.8	2.2
-5.2	4.8	9.8	-5.2	3.8	6.8	-2.2	-2.2	-5.2	-3.2
-2.6	4.4	11.4	-18.6	3.4	6.4	-11.6	-3.6	-3.6	0.4
1.25	5.25	6.25	-18.75	2.25	3.25	-9.75	1.25	-1.75	-4.75
2.75	3.75	5.75	-10.25	0.75	1.75	-4.25	-12.25	-0.25	-2.25
-1.05	-6.05	-8.05	-5.05	0.95	5.95	-3.05	-1.05	0.95	-2.05
-5.25	-7.25	1.75	-3.25	3.75	9.75	-6.25	-1.25	-1.25	-0.25
-3.55	-4.55	1.45	-1.55	1.45	9.45	-5.55	-1.55	-1.55	-1.55
0.7	-1.3	1.7	0.7	-1.3	4.7	-4.3	-4.3	0.7	-3.3
3.9	5.9	2.9	3.9	0.9	-8.1	0.9	-4.1	4.9	-13.1
3.35	3.35	3.35	2.35	2.35	-5.65	-1.65	-4.65	4.35	-3.65
4.3	3.3	5.3	-3.7	-6.7	7.3	-1.7	-10.7	7.3	-1.7
5.75	5.75	-1.25	-7.25	-5.25	5.75	-1.25	-7.25	5.75	0.75
8.15	5.15	-0.85	-8.85	-0.85	4.15	-0.85	-1.85	4.15	3.15
6.3	0.3	0.3	-8.7	-0.7	-0.7	-0.7	-2.7	6.3	3.3
8.6	-2.4	-3.4	1.6	-0.4	-2.4	1.6	-4.4	7.6	-3.4
12	-1	-15	4	1	3	4	-10	7	-10
7.4	0.4	-2.6	-4.6	4.4	2.4	0.4	-6.6	8.4	-6.6
-11.2	6.8	-9.2	-8.2	5.8	-4.2	-6.2	-1.2	4.8	0.8
-2.75	1.25	-7.75	-1.75	5.25	-0.75	-1.75	1.25	4.25	3.25
1.6	0.6	-2.4	3.6	-11.4	-7.4	-0.4	1.6	7.6	3.6
-13.3	2.7	1.7	2.7	-13.3	-10.3	2.7	1.7	5.7	-4.3
-8.55	5.45	3.45	-10.55	-6.55	-3.55	3.45	0.45	-1.55	-0.55
-14.55	8.45	-0.55	-7.55	-3.55	-3.55	3.45	-6.55	7.45	0.45
-10.65	1.35	1.35	-3.65	-0.65	0.35	-5.65	-0.65	6.35	2.35

0.65	-1.35	0.65	-3.35	-5.35	-3.35	-10.35	1.65	8.65	-6.35
9	-2	-6	-2	-6	2	-6	3	5	-2
-2.1	8.9	-4.1	-0.1	-2.1	4.9	-5.1	4.9	5.9	5.9
-3.95	1.05	-1.95	2.05	3.05	7.05	-8.95	5.05	8.05	4.05
-2.7	-0.7	6.3	4.3	3.3	6.3	-11.7	2.3	5.3	4.3
0.15	4.15	-6.85	3.15	2.15	4.15	-0.85	3.15	7.15	6.15
2.8	3.8	-5.2	3.8	0.8	8.8	-0.2	1.8	2.8	7.8
5.65	-3.35	-5.35	-3.35	-6.35	9.65	-1.35	-1.35	-4.35	-0.35
6.4	6.4	-2.6	-9.6	-7.6	4.4	-2.6	-0.6	-3.6	-3.6
7.2	-5.8	-1.8	-19.8	4.2	-3.8	-1.8	-1.8	-1.8	-2.8
5.75	-2.25	-2.25	-19.25	-8.25	-8.25	-1.25	-3.25	-4.25	4.75
6.85	-2.15	-3.15	-11.15	-2.15	-5.15	-2.15	-4.15	1.85	4.85
6.15	2.15	-2.85	-4.85	-0.85	2.15	-9.85	1.15	6.15	4.15
3.2	2.2	-5.8	-2.8	2.2	8.2	2.2	-2.8	-1.8	-4.8
4.55	2.55	-11.45	-0.45	2.55	3.55	2.55	-11.45	1.55	-13.45
-6.2	0.8	0.8	0.8	0.8	-6.2	3.8	-11.2	3.8	-5.2
-9.9	6.1	0.1	4.1	2.1	-15.9	-3.9	-10.9	6.1	-2.9
-15.65	5.35	4.35	7.35	-10.65	-6.65	-0.65	-1.65	3.35	-13.65
-7.1	3.9	6.9	6.9	-13.1	-9.1	-5.1	1.9	1.9	-2.1
-7.9	6.1	-0.9	8.1	-7.9	-3.9	-1.9	1.1	9.1	5.1
-2.05	10.95	-5.05	1.95	-0.05	-0.05	3.95	-3.05	11.95	4.95
-1.25	3.75	-11.25	1.75	3.75	1.75	6.75	-0.25	11.75	-2.25
-4.1	-1.1	-10.1	0.9	4.9	-3.1	9.9	-1.1	5.9	-5.1
-10.35	-9.35	0.65	6.65	7.65	-8.35	5.65	0.65	-5.35	-2.35
-6.65	-6.65	-12.65	5.35	11.35	-10.65	8.35	0.35	0.35	-16.65
-6.85	3.15	-9.85	6.15	10.15	-0.85	4.15	4.15	-12.85	-12.85
5.65	5.65	-5.35	8.65	3.65	-9.35	3.65	8.65	-15.35	-14.35
-0.4	7.6	-2.4	3.6	-7.4	-3.4	-3.4	7.6	-10.4	-9.4
-11.9	10.1	6.1	9.1	-17.9	0.1	-4.9	12.1	-5.9	-2.9
-13.6	10.4	4.4	11.4	-13.6	6.4	-11.6	9.4	-6.6	-5.6
-5.35	8.65	2.65	5.65	-6.35	5.65	0.65	5.65	-5.35	2.65
-5.05	10.95	3.95	5.95	0.95	-3.05	5.95	6.95	-2.05	1.95
-10.5	8.5	4.5	7.5	0.5	-10.5	4.5	11.5	-0.5	-2.5

1997 Average of Mean - Value (CUSUM)	1998 Average of Mean - Value (CUSUM)	1999 Average of Mean - Value (CUSUM)	2000 Average of Mean - Value (CUSUM)	2001 Average of Mean - Value (CUSUM)	2002 Average of Mean - Value (CUSUM)	2003 Average of Mean - Value (CUSUM)	2004 Average of Mean - Value (CUSUM)	2005 Average of Mean - Value (CUSUM)	2006 Average of Mean - Value (CUSUM)
-204.7	113.3	2.3	85.3	-219.7	30.3	-228.7	-193.7	2.3	-35.7

2007	2008	2009	2010	2011	2012	2013	2014	2015	
Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Value - Mean	Date's CUSUM Total
6.15	-3.85	6.15	-1.85	3.15	16.15	-6.85	1.15	-3.85	3.85
-3.35	-1.35	1.65	-4.35	5.65	4.65	-3.35	4.65	-1.35	1.35
-6.4	2.6	0.6	-5.4	6.6	10.6	-12.4	-1.4	-9.4	9.4
-2.35	1.65	2.65	-3.35	3.65	9.65	-11.35	-4.35	-3.35	3.35
-0.25	-0.25	-8.25	-0.25	1.75	11.75	-5.25	-2.25	-4.25	4.25
-0.85	-5.85	-0.85	1.15	2.15	10.15	-4.85	-0.85	-3.85	3.85
-5.1	0.9	-1.1	6.9	6.9	5.9	-8.1	1.9	2.9	-2.9
-7.15	0.85	-7.15	7.85	4.85	5.85	-1.15	0.85	0.85	-0.85
-1.05	-1.05	-6.05	5.95	0.95	6.95	-2.05	-0.05	0.95	-0.95
-2.55	-1.55	-4.55	1.45	3.45	6.45	-1.55	-1.55	4.45	-4.45
-2.95	1.05	-1.95	5.05	7.05	2.05	-7.95	-2.95	4.05	-4.05
-1.15	4.85	1.85	1.85	6.85	-4.15	-1.15	1.85	4.85	-4.85
-1.2	-2.2	-3.2	3.8	9.8	2.8	-9.2	1.8	4.8	-4.8
-4.2	-0.2	0.8	2.8	1.8	1.8	-3.2	1.8	1.8	-1.8
-6	2	2	7	-7	3	-1	-1	2	-2
-2.1	0.9	1.9	0.9	-3.1	3.9	-1.1	-5.1	-0.1	0.1
-0.2	-1.2	-1.2	-2.2	-2.2	3.8	1.8	-3.2	3.8	-3.8
-0.25	0.75	-7.25	-6.25	-0.25	3.75	-2.25	-7.25	2.75	-2.75
-2.4	0.6	-10.4	-0.4	3.6	0.6	-0.4	-5.4	0.6	-0.6
-3.4	4.6	-7.4	1.6	1.6	-5.4	-3.4	-13.4	3.6	-3.6
-3.95	5.05	-3.95	4.05	2.05	0.05	-2.95	-7.95	3.05	-3.05
-10.45	2.55	-5.45	5.55	4.55	5.55	-4.45	-6.45	2.55	-2.55
-7.05	-2.05	-2.05	7.95	2.95	7.95	-5.05	-1.05	-1.05	1.05
-2.1	-1.1	-1.1	4.9	2.9	7.9	-3.1	-2.1	1.9	-1.9
-1	1	2	7	2	10	1	0	2	-2
-2.5	-2.5	2.5	5.5	4.5	8.5	-3.5	-0.5	1.5	-1.5
0.45	0.45	0.45	3.45	4.45	7.45	-7.55	2.45	2.45	-2.45
-0.95	3.05	-0.95	0.05	0.05	7.05	-3.95	0.05	4.05	-4.05
-2.25	2.75	-4.25	4.75	3.75	4.75	-3.25	-7.25	3.75	-3.75
2.45	0.45	-7.55	5.45	6.45	6.45	0.45	-5.55	4.45	-4.45
1.85	-0.15	-3.15	6.85	7.85	-0.15	-8.15	-3.15	4.85	-4.85
3.45	0.45	0.45	7.45	2.45	5.45	-1.55	-7.55	0.45	-0.45
3.35	3.35	-5.65	-4.65	7.35	10.35	0.35	-4.65	5.35	-5.35
4.45	1.45	0.45	2.45	7.45	4.45	-1.55	-1.55	4.45	-4.45
6.7	0.7	1.7	4.7	-5.3	-3.3	-0.3	-0.3	6.7	-6.7
4.85	0.85	0.85	1.85	4.85	-1.15	-3.15	-2.15	3.85	-3.85
8.6	4.6	-0.4	3.6	3.6	-3.4	-1.4	2.6	-1.4	1.4
9.05	1.05	2.05	2.05	4.05	-4.95	-2.95	6.05	-0.95	0.95
11.25	-2.75	3.25	4.25	5.25	3.25	-5.75	1.25	3.25	-3.25
14	-4	4	5	2	-1	0	0	4	-4
13.75	-4.25	3.75	4.75	5.75	-2.25	0.75	-3.25	4.75	-4.75
10.8	-1.2	5.8	5.8	4.8	-4.2	0.8	-6.2	1.8	-1.8
2.1	-6.9	-1.9	7.1	7.1	0.1	2.1	0.1	2.1	-2.1

11.9	**-7.1**	**1.9**	**7.9**	**6.9**	**2.9**	**0.9**	**-4.1**	**0.9**	-0.9
10.7	**-4.3**	**1.7**	**0.7**	**5.7**	**-0.3**	**-5.3**	**-3.3**	**1.7**	-1.7
14	**-1**	**2**	**2**	**0**	**-3**	**-15**	**-1**	**2**	-2
12.2	**-2.8**	**-0.8**	**1.2**	**1.2**	**2.2**	**-21.8**	**-0.8**	**1.2**	-1.2
11.95	**-4.05**	**-2.05**	**1.95**	**2.95**	**-2.05**	**-23.05**	**-0.05**	**-0.05**	0.05
6.85	**-4.15**	**-2.15**	**2.85**	**3.85**	**-3.15**	**-13.15**	**-1.15**	**-2.15**	2.15
4.7	**-0.3**	**-0.3**	**1.7**	**5.7**	**-6.3**	**-8.3**	**-4.3**	**-1.3**	1.3
6.7	**0.7**	**-1.3**	**3.7**	**3.7**	**-5.3**	**-5.3**	**-0.3**	**-1.3**	1.3
9.9	**-4.1**	**-1.1**	**3.9**	**4.9**	**-1.1**	**-5.1**	**2.9**	**-0.1**	0.1
14.6	**-7.4**	**-4.4**	**4.6**	**8.6**	**-5.4**	**-1.4**	**3.6**	**2.6**	-2.6
9.6	**-10.4**	**-7.4**	**4.6**	**3.6**	**-0.4**	**1.6**	**4.6**	**-1.4**	1.4
7.15	**-4.85**	**-1.85**	**2.15**	**5.15**	**-1.85**	**-3.85**	**0.15**	**1.15**	-1.15
7.5	**-8.5**	**0.5**	**2.5**	**8.5**	**-1.5**	**-4.5**	**-2.5**	**-2.5**	2.5
3.55	**-5.45**	**1.55**	**1.55**	**10.55**	**1.55**	**-6.45**	**-2.45**	**-2.45**	2.45
0.4	**-7.6**	**-4.6**	**1.4**	**7.4**	**2.4**	**-1.6**	**0.4**	**-2.6**	2.6
0.85	**-1.15**	**-12.15**	**-0.15**	**7.85**	**-7.15**	**2.85**	**3.85**	**-4.15**	4.15
0.7	**0.7**	**-2.3**	**-4.3**	**4.7**	**-2.3**	**3.7**	**3.7**	**-7.3**	7.3
3.2	**3.2**	**-6.8**	**-0.8**	**4.2**	**-5.8**	**1.2**	**2.2**	**-11.8**	11.8
0.1	**2.1**	**-6.9**	**3.1**	**6.1**	**3.1**	**4.1**	**3.1**	**-1.9**	1.9
-1.25	**-4.25**	**-14.25**	**4.75**	**9.75**	**5.75**	**4.75**	**4.75**	**1.75**	-1.75
-2.25	**-0.25**	**-7.25**	**5.75**	**10.75**	**3.75**	**-1.25**	**4.75**	**4.75**	-4.75
2.1	**-2.9**	**-6.9**	**6.1**	**9.1**	**-0.9**	**4.1**	**6.1**	**3.1**	-3.1
5.2	**-0.8**	**-2.8**	**-1.8**	**-5.8**	**-8.8**	**3.2**	**-3.8**	**6.2**	-6.2
2.8	**1.8**	**-3.2**	**-1.2**	**-8.2**	**-1.2**	**2.8**	**2.8**	**0.8**	-0.8
0.4	**2.4**	**0.4**	**5.4**	**-9.6**	**0.4**	**3.4**	**6.4**	**0.4**	-0.4
1.25	**4.25**	**-0.75**	**6.25**	**-15.75**	**7.25**	**3.25**	**5.25**	**0.25**	-0.25
2.75	**4.75**	**1.75**	**7.75**	**-12.25**	**2.75**	**5.75**	**-1.25**	**-1.25**	1.25
3.95	**2.95**	**-1.05**	**6.95**	**-4.05**	**-2.05**	**4.95**	**-1.05**	**1.95**	-1.95
3.75	**1.75**	**-5.25**	**8.75**	**-1.25**	**-1.25**	**3.75**	**0.75**	**-0.25**	0.25
3.45	**-2.55**	**-10.55**	**10.45**	**0.45**	**-2.55**	**3.45**	**4.45**	**0.45**	-0.45
0.7	**1.7**	**-4.3**	**3.7**	**1.7**	**-4.3**	**4.7**	**6.7**	**-7.3**	7.3
1.9	**2.9**	**-3.1**	**2.9**	**5.9**	**-2.1**	**3.9**	**2.9**	**-8.1**	8.1
-2.65	**4.35**	**-1.65**	**7.35**	**8.35**	**-0.65**	**-1.65**	**-5.65**	**-6.65**	6.65
-1.7	**-4.7**	**-4.7**	**7.3**	**2.3**	**3.3**	**0.3**	**-3.7**	**-3.7**	3.7
-6.25	**-2.25**	**-0.25**	**6.75**	**-10.25**	**3.75**	**6.75**	**3.75**	**-3.25**	3.25
-3.85	**-12.85**	**-8.85**	**13.15**	**-2.85**	**1.15**	**-2.85**	**4.15**	**1.15**	-1.15
-2.7	**0.3**	**-1.7**	**11.3**	**-4.7**	**-2.7**	**-3.7**	**3.3**	**1.3**	-1.3
-0.4	**-1.4**	**-8.4**	**9.6**	**-5.4**	**-1.4**	**1.6**	**1.6**	**4.6**	-4.6
-2	**-4**	**-2**	**13**	**-1**	**-4**	**3**	**0**	**6**	-6
-3.6	**-6.6**	**-2.6**	**13.4**	**4.4**	**3.4**	**-8.6**	**5.4**	**-4.6**	4.6
4.8	**2.8**	**2.8**	**10.8**	**-1.2**	**5.8**	**0.8**	**0.8**	**-5.2**	5.2
0.25	**-0.75**	**0.25**	**8.25**	**0.25**	**-1.75**	**-0.75**	**-5.75**	**-1.75**	1.75
8.6	**-2.4**	**4.6**	**7.6**	**1.6**	**-2.4**	**-9.4**	**-2.4**	**-6.4**	6.4
7.7	**2.7**	**7.7**	**13.7**	**8.7**	**2.7**	**-12.3**	**-2.3**	**-12.3**	12.3
5.45	**1.45**	**6.45**	**-2.55**	**7.45**	**7.45**	**-0.55**	**-4.55**	**-7.55**	7.55
6.45	**-1.55**	**1.45**	**2.45**	**5.45**	**9.45**	**0.45**	**-0.55**	**-7.55**	7.55
6.35	**7.35**	**4.35**	**-2.65**	**0.35**	**7.35**	**-1.65**	**-4.65**	**-3.65**	3.65

4.65	**9.65**	**-4.35**	**2.65**	**7.65**	**7.65**	**-0.35**	**-5.35**	**0.65**	-0.65
2	**9**	**-3**	**-1**	**1**	**-5**	**0**	**7**	**8**	-8
2.9	**-3.1**	**-1.1**	**1.9**	**-12.1**	**-2.1**	**4.9**	**8.9**	**-6.1**	6.1
5.05	**-2.95**	**-1.95**	**1.05**	**-8.95**	**-4.95**	**5.05**	**8.05**	**-10.95**	10.95
-0.7	**2.3**	**-1.7**	**-9.7**	**-2.7**	**-3.7**	**4.3**	**0.3**	**-11.7**	11.7
2.15	**5.15**	**-3.85**	**-10.85**	**2.15**	**4.15**	**7.15**	**-12.85**	**-7.85**	7.85
2.8	**4.8**	**-16.2**	**-8.2**	**4.8**	**3.8**	**5.8**	**-7.2**	**-5.2**	5.2
5.65	**5.65**	**-5.35**	**-3.35**	**4.65**	**6.65**	**7.65**	**1.65**	**-0.35**	0.35
7.4	**6.4**	**3.4**	**5.4**	**3.4**	**-7.6**	**-1.6**	**6.4**	**5.4**	-5.4
8.2	**-2.8**	**5.2**	**7.2**	**3.2**	**-11.8**	**-2.8**	**11.2**	**7.2**	-7.2
6.75	**0.75**	**10.75**	**10.75**	**-2.25**	**-4.25**	**1.75**	**11.75**	**6.75**	-6.75
5.85	**1.85**	**-1.15**	**10.85**	**-7.15**	**-2.15**	**4.85**	**10.85**	**-4.15**	4.15
-8.85	**2.15**	**1.15**	**10.15**	**-10.85**	**-0.85**	**3.15**	**10.15**	**-2.85**	2.85
-3.8	**1.2**	**-9.8**	**4.2**	**-2.8**	**3.2**	**5.2**	**9.2**	**0.2**	-0.2
-1.45	**1.55**	**-2.45**	**4.55**	**-1.45**	**-0.45**	**6.55**	**9.55**	**5.55**	-5.55
3.8	**5.8**	**-8.2**	**-1.2**	**2.8**	**2.8**	**2.8**	**0.8**	**3.8**	-3.8
5.1	**8.1**	**-11.9**	**5.1**	**7.1**	**4.1**	**-4.9**	**-3.9**	**8.1**	-8.1
3.35	**10.35**	**-11.65**	**3.35**	**11.35**	**1.35**	**1.35**	**-2.65**	**4.35**	-4.35
8.9	**-4.1**	**-22.1**	**6.9**	**11.9**	**1.9**	**-1.1**	**6.9**	**-3.1**	3.1
5.1	**-4.9**	**-16.9**	**6.1**	**8.1**	**2.1**	**1.1**	**4.1**	**-5.9**	5.9
4.95	**-6.05**	**-10.05**	**10.95**	**-4.05**	**1.95**	**-8.05**	**1.95**	**-7.05**	7.05
3.75	**-5.25**	**-3.25**	**5.75**	**-12.25**	**-0.25**	**-1.25**	**1.75**	**-0.25**	0.25
3.9	**-2.1**	**-3.1**	**5.9**	**-11.1**	**1.9**	**-2.1**	**2.9**	**1.9**	-1.9
-0.35	**-4.35**	**1.65**	**5.65**	**-4.35**	**6.65**	**-3.35**	**-2.35**	**6.65**	-6.65
11.35	**-7.65**	**2.35**	**6.35**	**0.35**	**8.35**	**-6.65**	**2.35**	**11.35**	-11.35
-9.85	**-14.85**	**0.15**	**12.15**	**4.15**	**10.15**	**-2.85**	**5.15**	**7.15**	-7.15
-8.35	**-2.35**	**-4.35**	**6.65**	**6.65**	**10.65**	**-13.35**	**7.65**	**1.65**	-1.65
-3.4	**-1.4**	**-6.4**	**13.6**	**5.6**	**8.6**	**-10.4**	**12.6**	**-4.4**	4.4
-1.9	**-9.9**	**-8.9**	**7.1**	**10.1**	**1.1**	**0.1**	**15.1**	**-12.9**	12.9
1.4	**-18.6**	**2.4**	**5.4**	**5.4**	**-12.6**	**-4.6**	**8.4**	**9.4**	-9.4
-7.35	**-10.35**	**5.65**	**-1.35**	**-10.35**	**-13.35**	**5.65**	**3.65**	**0.65**	-0.65
-4.05	**-6.05**	**-5.05**	**-0.05**	**-10.05**	**-15.05**	**6.95**	**-3.05**	**-1.05**	1.05
0.5	**-3.5**	**-1.5**	**4.5**	**-5.5**	**-5.5**	**3.5**	**-7.5**	**-8.5**	8.5

2007 Average of Mean - Value (CUSUM)	**2008 Average of Mean - Value (CUSUM)**	**2009 Average of Mean - Value (CUSUM)**	**2010 Average of Mean - Value (CUSUM)**	**2011 Average of Mean - Value (CUSUM)**	**2012 Average of Mean - Value (CUSUM)**	**2013 Average of Mean - Value (CUSUM)**	**2014 Average of Mean - Value (CUSUM)**	**2015 Average of Mean - Value (CUSUM)**
253.3	**-101.7**	**-288.7**	**476.3**	**238.3**	**161.3**	**-205.7**	**74.3**	**-4.7**