Rational Data Analysis--Getting the Best Return

May 19, 2010

1

Month	p-value	Numerator	Denominator
1	0.7600	19	25
2	0.9630	26	27
3	0.7368	14	19
4	0.8571	24	28
5	0.8788	29	33
6	0.7308	19	26
7	0.7949	31	39
8	0.8600	43	50
9	0.8636	38	44
10	0.8718	34	39
11	0.8889	32	36
12	0.6818	30	44
13	0.6000	12	20
14	0.8750	35	40
15	0.8800	22	25
16	0.6552	19	29
17	0.5000	12	24
18	0.5897	23	39
19	0.9000	45	50
20	0.5313	17	32
21	0.5806	18	31
22	0.4800	12	25
23	0.7778	21	27
24	0.8919	33	37
		▼	▼
Total:		608	789

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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2

Month	p-value	Numerator	Denominator
1	0.1667	3	18
2	0.1053	2	19
3	0.3077	4	13
4	0.1765	3	17
5	0.2500	5	20
6	0.1875	3	16
7	0.3158	6	19
8	0.2353	4	17
9	0.2727	3	11
10	0.3333	4	12
11	0.1818	2	11
12	0.4167	5	12
13	0.3000	3	10
14	0.1667	2	12
15	0.3125	5	16
16	0.2000	4	20
17	0.3333	3	9
18	0.1667	2	12
19	0.3077	4	13
20	0.3571	5	14
21	0.2105	4	19
22	0.2222	4	18
23	0.1667	3	18
24	0.1250	2	16
		▼	▼
Total:		85	362

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.9429	66	70
2	0.9000	63	70
3	0.9643	81	84
4	0.9403	63	67
5	0.9851	66	67
6	0.9063	58	64
7	0.9014	64	71
8	0.9531	61	64
9	0.9385	61	65
10	0.9091	60	66
11	0.9531	61	64
12	0.9375	60	64
13	0.9403	63	67
14	0.9538	62	65
15	0.9375	60	64
16	0.9355	58	62
17	1.0000	62	62
18	0.9032	56	62
19	0.9531	61	64
20	0.9853	67	68
21	0.9403	63	67
22	0.9265	63	68
23	0.9531	61	64
24	0.8571	54	63
		▼	▼
Total:		1,494	1,592

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.3333	1	3
2	0.2500	1	4
3	0.5000	1	2
4	0.6000	3	5
5	0.5000	3	6
6	0.3333	1	3
7	0.4000	2	5
8	0.4000	2	5
9	0.5000	2	4
10	0.2500	1	4
11	0.0000	0	1
12	1.0000	2	2
13	0.5000	1	2
14	0.0000	0	1
15	0.6667	2	3
16	0.5000	1	2
17	0.6000	3	5
18	1.0000	3	3
19	0.5000	1	2
20	0.7500	3	4
21	0.5000	2	4
22	0.5000	1	2
23	0.5000	2	4
24	0.5000	2	4
		▼	▼
Total:		40	80

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.8000	16	20
2	1.0000	21	21
3	0.9130	21	23
4	0.9200	23	25
5	0.8214	23	28
6	0.8261	19	23
7	0.6571	23	35
8	0.8500	17	20
9	1.0000	16	16
10	0.5217	12	23
11	0.9474	18	19
12	0.8667	13	15
13	0.9130	21	23
14	0.8400	21	25
15	0.8571	18	21
16	0.8966	26	29
17	0.7273	8	11
18	0.8261	19	23
19	0.8824	15	17
20	0.9000	27	30
21	0.9091	20	22
22	0.8333	15	18
23	0.7368	14	19
24	0.8261	19	23
		▼	▼
Total:		445	529

Formula A

"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
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Formula B

Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.8235	14	17
2	0.8750	21	24
3	0.8636	19	22
4	0.8571	18	21
5	0.7273	16	22
6	0.5263	10	19
7	0.8750	28	32
8	0.8235	14	17
9	0.7000	7	10
10	0.7857	11	14
11	0.7333	11	15
12	0.8182	9	11
13	0.8182	18	22
14	0.8261	19	23
15	0.7895	15	19
16	0.6552	19	29
17	0.7778	7	9
18	0.7727	17	22
19	0.9231	12	13
20	0.8929	25	28
21	0.9474	18	19
22	0.9444	17	18
23	0.9333	14	15
24	1.0000	19	19
		▼	▼
Total:		378	460

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.7778	14	18
2	0.7500	12	16
3	0.5385	7	13
4	0.7333	11	15
5	0.8824	15	17
6	0.8000	20	25
7	0.8966	26	29
8	0.7500	15	20
9	0.7407	20	27
10	1.0000	24	24
11	0.7391	17	23
12	0.6667	10	15
13	0.8636	19	22
14	0.8000	12	15
15	0.9286	13	14
16	0.6207	18	29
17	0.8750	28	32
18	0.7284	59	81
19	0.8235	42	51
20	0.8529	29	34
21	0.8108	30	37
22	0.8462	22	26
23	0.8500	17	20
24	0.6000	9	15
		▼	▼
Total:		489	618

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.1538	2	13
2	0.2143	3	14
3	0.1333	2	15
4	0.2000	3	15
5	0.1538	2	13
6	0.1333	2	15
7	0.1176	2	17
8	0.1765	3	17
9	0.1111	2	18
10	0.1875	3	16
11	0.1333	2	15
12	0.1333	2	15
13	0.1250	2	16
14	0.3333	4	12
15	0.1176	2	17
16	0.1765	3	17
17	0.1333	2	15
18	0.1333	2	15
19	0.0714	1	14
20	0.2500	1	4
21	0.2857	2	7
22	0.6000	3	5
23	0.2727	3	11
24	0.5000	2	4
		▼	▼
Total:		55	320

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.8000	4	5
2	1.0000	1	1
3	0.6000	3	5
4	0.7500	3	4
5	1.0000	7	7
6	1.0000	4	4
7	0.8667	13	15
8	0.8333	10	12
9	0.9000	9	10
10	0.9444	17	18
11	0.9091	10	11
12	0.8889	8	9
13	1.0000	6	6
14	0.6667	2	3
15	1.0000	5	5
16	0.8571	6	7
17	0.9167	11	12
18	0.9643	27	28
19	1.0000	9	9
20	0.7500	9	12
21	0.7500	6	8
22	0.8333	5	6
23	0.8889	8	9
24	0.7778	7	9
		▼	▼
Total:		190	215

Formula A		Formula B	
"Small numbers"? Caution with SPC!		Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)	If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.9286	13	14
2	0.5833	7	12
3	0.8462	11	13
4	0.8000	12	15
5	0.7500	15	20
6	0.6944	25	36
7	0.6250	10	16
8	0.5294	9	17
9	0.6000	12	20
10	0.6667	20	30
11	0.5714	12	21
12	0.5882	10	17
13	0.6667	16	24
14	0.8636	19	22
15	0.6429	9	14
16	0.8636	19	22
17	0.5789	11	19
18	0.9600	24	25
19	0.5455	12	22
20	0.4545	10	22
21	0.7143	20	28
22	0.8667	13	15
23	0.7500	18	24
24	0.7857	11	14
		▼	▼
Total:		338	482

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.5926	16	27
2	0.6786	19	28
3	0.7586	22	29
4	0.7576	25	33
5	0.7931	23	29
6	0.9024	37	41
7	0.0400	1	25
8	0.1250	3	24
9	0.2500	7	28
10	0.4737	18	38
11	0.4118	14	34
12	0.6207	18	29
13	0.4043	19	47
14	0.2333	7	30
15	0.5200	13	25
16	0.8800	44	50
17	0.7586	22	29
18	0.9000	36	40
19	0.4750	19	40
20	0.6667	26	39
21	0.7143	20	28
22	0.5714	16	28
23	0.6000	18	30
24	0.4400	11	25
		▼	▼
Total:		454	776

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.6471	11	17
2	0.5417	13	24
3	0.5652	13	23
4	0.3750	12	32
5	0.4615	12	26
6	0.4333	13	30
7	0.5000	14	28
8	0.6667	12	18
9	0.5789	11	19
10	0.4643	13	28
11	0.5455	12	22
12	0.5714	12	21
13	0.4762	10	21
14	0.4444	16	36
15	0.4286	12	28
16	0.4375	14	32
17	0.5000	15	30
18	0.3636	12	33
19	0.3939	13	33
20	0.3043	14	46
21	0.2615	17	65
22	0.3846	15	39
23	0.2889	13	45
24	0.4054	15	37
		▼	▼
Total:		314	733

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.9600	24	25
2	0.8438	27	32
3	1.0000	26	26
4	0.9412	32	34
5	0.9333	28	30
6	0.9024	37	41
7	0.9583	46	48
8	0.9535	41	43
9	0.9362	44	47
10	0.9524	40	42
11	0.9524	40	42
12	0.9688	31	32
13	0.9722	35	36
14	0.9600	24	25
15	0.8750	28	32
16	0.9444	34	36
17	0.9216	47	51
18	0.5614	32	57
19	0.9863	72	73
20	0.9592	47	49
21	0.9074	49	54
22	0.9512	39	41
23	0.9143	32	35
24	0.9565	22	23
		▼	▼
Total:		877	954

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.0565	74	1,309
2	0.0499	68	1,362
3	0.0572	68	1,189
4	0.0567	75	1,323
5	0.0552	66	1,196
6	0.0591	70	1,185
7	0.0635	84	1,322
8	0.0613	80	1,306
9	0.0607	79	1,301
10	0.0787	98	1,245
11	0.0623	81	1,300
12	0.0572	68	1,189
13	0.0667	82	1,230
14	0.0505	69	1,365
15	0.0409	49	1,197
16	0.0539	72	1,337
17	0.0466	54	1,158
18	0.0597	79	1,324
19	0.0542	74	1,365
20	0.0475	58	1,221
21	0.0458	60	1,310
22	0.0545	70	1,285
23	0.0461	56	1,216
24	0.0483	61	1,264
		▼	▼
Total:		1,695	30,499

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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15

Month	p-value	Numerator	Denominator	Formula A: "Small numbers"? Caution with SPC! — If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	Formula A: "Small numbers"? Caution with SPC! — If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
1	0.0120	4	334	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
2	0.0000	0	329	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
3	0.0035	1	285	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
4	0.0095	3	315	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
5	0.0098	3	305	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
6	0.0069	2	288	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
7	0.0178	5	281	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
8	0.0085	2	236	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
9	0.0043	1	233	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
10	0.0038	1	263	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
11	0.0000	0	277	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
12	0.0106	3	283	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
13	0.0078	2	257	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
14	0.0059	2	337	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
15	0.0133	4	300	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
16	0.0102	3	293	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
17	0.0071	2	283	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
18	0.0036	1	274	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
19	0.0072	2	276	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
20	0.0064	2	314	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
21	0.0000	0	238	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
22	0.0082	2	243	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
23	0.0034	1	298	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
24	0.0064	2	313	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
		▼	▼				
Total:		48	6,855				

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.6667	6	9
2	0.5385	7	13
3	0.8182	9	11
4	0.8667	13	15
5	0.7500	6	8
6	0.9000	9	10
7	0.8182	9	11
8	0.6429	9	14
9	0.6667	8	12
10	0.7500	21	28
11	0.7143	10	14
12	0.8333	5	6
13	0.4545	5	11
14	0.7692	10	13
15	0.7000	7	10
16	0.4667	7	15
17	0.6000	9	15
18	0.7143	10	14
19	0.5000	5	10
20	0.5714	4	7
21	0.7500	9	12
22	0.5882	10	17
23	0.5333	8	15
24	0.8000	12	15
		▼	▼
Total:		208	305

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.1628	7	43
2	0.1795	7	39
3	0.1034	3	29
4	0.1111	4	36
5	0.1860	8	43
6	0.2105	8	38
7	0.1143	4	35
8	0.1290	4	31
9	0.1333	4	30
10	0.0800	2	25
11	0.1905	8	42
12	0.1875	6	32
13	0.1951	8	41
14	0.2609	12	46
15	0.1489	7	47
16	0.1429	7	49
17	0.2667	8	30
18	0.0968	3	31
19	0.0769	3	39
20	0.1471	5	34
21	0.1765	6	34
22	0.0500	1	20
23	0.1200	3	25
24	0.2973	11	37
		▼	▼
Total:		139	856

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.8000	12	15
2	0.8750	14	16
3	0.7500	6	8
4	0.9091	10	11
5	0.5882	10	17
6	0.8000	8	10
7	0.8571	12	14
8	0.7273	8	11
9	0.8000	4	5
10	0.8571	6	7
11	0.6250	5	8
12	0.6000	3	5
13	1.0000	7	7
14	0.8889	8	9
15	0.9000	9	10
16	0.6875	11	16
17	1.0000	5	5
18	0.6667	6	9
19	1.0000	6	6
20	0.6000	6	10
21	0.5000	4	8
22	1.0000	5	5
23	0.8182	9	11
24	0.6000	6	10
		▼	▼
Total:		180	233

Formula A

"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B

Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.0000	0	29
2	0.0345	1	29
3	0.0000	0	25
4	0.1875	3	16
5	0.1429	2	14
6	0.0000	0	14
7	0.0000	0	4
8	0.1111	1	9
9	0.0000	0	17
10	0.0000	0	4
11	0.0556	1	18
12	0.0000	0	21
13	0.2000	3	15
14	0.1667	4	24
15	0.0000	0	11
16	0.2273	5	22
17	0.1579	3	19
18	0.0000	0	21
19	0.0667	1	15
20	0.1250	2	16
21	0.0000	0	24
22	0.2000	2	10
23	0.2000	3	15
24	0.0476	1	21
		▼	▼
Total:		32	413

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.5000	2	4
2	0.0000	0	6
3	0.0000	0	3
4	0.0000	0	3
5	0.5000	4	8
6	0.3000	3	10
7	0.6000	3	5
8	0.5000	4	8
9	0.2500	2	8
10	0.5000	4	8
11	0.0000	0	6
12	0.6667	2	3
13	0.0000	0	2
14	0.3333	1	3
15	0.2500	1	4
16	1.0000	8	8
17	0.6667	4	6
18	0.8333	15	18
19	0.9000	9	10
20	1.0000	6	6
21	1.0000	13	13
22	1.0000	6	6
23	0.8333	5	6
24	1.0000	2	2
		▼	▼
Total:		94	156

Formula A

"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B

Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.6296	17	27
2	0.9200	23	25
3	0.5882	10	17
4	0.7000	21	30
5	0.7949	31	39
6	0.8889	32	36
7	0.7714	27	35
8	0.7600	19	25
9	0.5500	11	20
10	0.6316	24	38
11	0.5455	18	33
12	0.5882	10	17
13	0.5806	18	31
14	0.4375	14	32
15	0.5172	15	29
16	0.6364	14	22
17	0.5556	10	18
18	0.6471	22	34
19	0.4565	21	46
20	0.4815	13	27
21	0.3500	7	20
22	0.3333	8	24
23	0.4091	9	22
24	0.6111	11	18
		▼	▼
Total:		405	665

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.0345	1	29
2	0.0909	2	22
3	0.0571	2	35
4	0.0000	0	17
5	0.2105	4	19
6	0.2778	5	18
7	0.0769	2	26
8	0.1053	2	19
9	0.1250	3	24
10	0.0571	2	35
11	0.1111	3	27
12	0.0000	0	16
13	0.1250	3	24
14	0.1304	3	23
15	0.0769	2	26
16	0.1333	4	30
17	0.1364	3	22
18	0.1613	5	31
19	0.0769	2	26
20	0.0714	2	28
21	0.0000	0	19
22	0.0769	2	26
23	0.0455	1	22
24	0.1111	2	18
		▼	▼
Total:		55	582

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.5652	13	23
2	0.7407	20	27
3	0.4706	8	17
4	0.6786	19	28
5	0.7419	23	31
6	0.5000	13	26
7	0.7027	26	37
8	0.6852	37	54
9	0.7619	32	42
10	0.7436	29	39
11	0.7647	26	34
12	0.5455	24	44
13	0.3333	6	18
14	0.7250	29	40
15	0.6957	16	23
16	0.4483	13	29
17	0.2727	6	22
18	0.3469	17	49
19	0.6780	40	59
20	0.3438	11	32
21	0.4138	12	29
22	0.5000	11	22
23	0.5500	22	40
24	0.3448	10	29
		▼	▼
Total:		463	794

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.1111	2	18
2	0.1176	2	17
3	0.2941	5	17
4	0.2667	4	15
5	0.0000	0	15
6	0.0667	1	15
7	0.2000	2	10
8	0.3529	6	17
9	0.3750	6	16
10	0.7857	11	14
11	0.5625	9	16
12	0.8462	11	13
13	0.6842	13	19
14	0.9091	10	11
15	0.9091	10	11
16	0.5455	6	11
17	0.4545	5	11
18	0.2500	2	8
19	0.7200	18	25
20	0.8000	4	5
21	0.6667	2	3
22	0.1250	2	16
23	0.3077	4	13
24	0.3529	6	17
		▼	▼
Total:		141	333

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.7895	15	19
2	0.8696	20	23
3	0.9091	20	22
4	0.9167	22	24
5	0.8148	22	27
6	0.8182	18	22
7	0.5294	18	34
8	0.8421	16	19
9	1.0000	15	15
10	0.9167	11	12
11	1.0000	17	17
12	0.9231	12	13
13	0.9524	20	21
14	0.8696	20	23
15	0.8947	17	19
16	0.9259	25	27
17	0.8750	7	8
18	0.9000	18	20
19	0.8750	14	16
20	0.9630	26	27
21	1.0000	19	19
22	0.5152	17	33
23	0.4091	9	22
24	0.6111	11	18
		▼	▼
Total:		409	500

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator	Formula A: "Small numbers"? Caution with SPC! — If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	Formula A: "Small numbers"? Caution with SPC! — If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
1	0.0495	11	222	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
2	0.0317	7	221	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
3	0.0311	6	193	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
4	0.0284	6	211	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
5	0.0402	8	199	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
6	0.0518	10	193	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
7	0.0294	6	204	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
8	0.0390	6	154	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
9	0.0705	11	156	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
10	0.0530	8	151	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
11	0.0376	7	186	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
12	0.0157	3	191	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
13	0.0109	2	184	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
14	0.0337	7	208	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
15	0.0529	10	189	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
16	0.0259	5	193	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
17	0.0553	11	199	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
18	0.0503	10	199	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
19	0.0256	5	195	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
20	0.0332	7	211	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
21	0.0390	6	154	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
22	0.0204	3	147	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
23	0.0238	5	210	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
24	0.0227	5	220	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
		▼	▼				
Total:		165	4,590				

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.8000	12	15
2	0.9375	15	16
3	1.0000	8	8
4	0.8462	11	13
5	0.7368	14	19
6	0.8462	11	13
7	0.8889	16	18
8	0.8462	11	13
9	0.7500	6	8
10	0.8333	5	6
11	1.0000	9	9
12	0.8333	5	6
13	1.0000	8	8
14	0.8000	8	10
15	0.9091	10	11
16	0.9000	18	20
17	1.0000	6	6
18	0.7778	7	9
19	0.9000	9	10
20	0.8333	10	12
21	0.7500	6	8
22	0.7143	5	7
23	0.6667	10	15
24	0.8000	8	10
		▼	▼
Total:		228	270

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator
1	0.1329	19	143
2	0.1488	18	121
3	0.1210	15	124
4	0.1190	15	126
5	0.2203	26	118
6	0.1440	18	125
7	0.2000	24	120
8	0.2000	26	130
9	0.1880	25	133
10	0.1367	19	139
11	0.1324	18	136
12	0.1261	14	111
13	0.1190	15	126
14	0.1288	17	132
15	0.1570	19	121
16	0.1417	18	127
17	0.2339	29	124
18	0.1875	24	128
19	0.1866	25	134
20	0.1387	19	137
21	0.0822	12	146
22	0.1157	14	121
23	0.0659	11	167
24	0.1259	18	143
		▼	▼
Total:		458	3,132

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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Month	p-value	Numerator	Denominator	Formula A: "Small numbers"? Caution with SPC! — If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	Formula A: "Small numbers"? Caution with SPC! — If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	Formula B: Subgroup with sufficient power to ID outliers? — If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
1	0.0003	6	22,514	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
2	0.0003	7	21,332	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
3	0.0005	13	24,695	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
4	0.0005	12	23,841	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
5	0.0003	8	24,765	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
6	0.0004	9	23,026	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
7	0.0004	10	24,204	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
8	0.0004	9	23,452	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
9	0.0003	7	26,878	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
10	0.0004	9	23,980	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
11	0.0003	6	22,378	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
12	0.0002	5	20,348	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
13	0.0003	7	22,671	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
14	0.0002	5	21,658	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
15	0.0003	6	23,557	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
16	0.0003	7	22,309	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
17	0.0003	7	23,168	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
18	0.0004	8	22,382	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
19	0.0003	8	24,749	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
20	0.0002	5	23,339	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
21	0.0002	6	24,748	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
22	0.0004	9	24,262	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
23	0.0002	5	20,577	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
24	0.0002	4	19,491	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy	[ ] Does not satisfy
		▼	▼				
Total:		178	554,324				

If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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30

Month	p-value	Numerator	Denominator
1	0.9861	71	72
2	0.9733	73	75
3	0.9853	67	68
4	0.9718	69	71
5	0.8378	62	74
6	0.9836	60	61
7	0.9697	64	66
8	0.9718	69	71
9	0.9848	65	66
10	1.0000	65	65
11	1.0000	69	69
12	0.9846	64	65
13	0.9853	67	68
14	0.9853	67	68
15	1.0000	70	70
16	0.9744	76	78
17	0.9848	65	66
18	0.9851	66	67
19	1.0000	69	69
20	1.0000	70	70
21	0.9848	65	66
22	1.0000	65	65
23	1.0000	70	70
24	0.9853	67	68
		▼	▼
Total:		1,615	1,648

Formula A	
"Small numbers"? Caution with SPC!	
If p-bar ≤ 0.5 Denominator Must Be ≥ 1 / p-bar	If p-bar > 0.5 Denominator Must Be > 1 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy

Formula B	
Subgroup with sufficient power to ID outliers?	
If p-bar ≤ 0.5 Denominator Must Be ≥ 4 / p-bar	If p-bar > 0.5 Denominator Must Be > 4 /(1 -p-bar)
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
[ ] Does not satisfy	[ ] Does not satisfy
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If p-bar is less than 0.5, data are skewed to the right.
If p-bar is than 0.5, data are skewed to the left.

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