

1	B	C	D	E	F	G	H	I	J
2	<b>INPUTS</b>		<b>INSTRUCTIONS:</b>						
3	10	per sample	Step 1 Insert formula in 1st row. Pull I18 to the right. Pull down 1st row						
4	20,000	samples	I18	=NORM.S.INV(RAND())	B18	=C18/B\$4			
5			G18	=MEDIAN(I18:R18)	H18	=STDEV(I18:R18)			
6	<b>RESULTS</b>	Skew3	F18	=AVERAGE(I18:R18)	E18	=3*ABS(F18-G18)/H18			
7	Percentile	Cutoff	Step 2 Insert ID # in C18 and C19. Pull down first two rows to row 20,017.						
8	0.800	0.7685	Step 3 Insert formula to obtain desired cutoff. Pull down four rows						
9	0.900	0.9693	C8	=VLOOKUP(B8,B\$18:D\$20017,3)					
10	0.950	1.1197	Step 4 In location text box, select Sort1 or type input range [E18:E20017].						
11	0.975	1.2623	Step 5 Copy selected values to clipboard and paste VALUES into D18.						
12	0.990	1.4120	Step 6 In location box, select Sort2 or type D18:D20017. Sort ascending.						
13	0.995	1.5077	Select "Continue with the Current Selection" when prompted.						
14			Step 7 Copy C8:C13. Paste special values in N4 (or O4, P4, Q4, R4 or S4)						

16	B	C	D	E	F	G	H	I	J
17	%ile	ID	Sorted Skew	Skew3	Mean	Median	StdDev	S1	S2
18	0.005%	1	0.00010749	0.018232	0.117044	0.120544	0.575836	-0.58062	0.5326422
19	0.010%	2	0.00011622	0.195719	-0.05464	-0.12941	1.146094	0.032779	-1.1680502
	0.015%	3	0.00012196	0.259452	0.363195	0.286049	0.892028	0.180705	0.6642982
	0.020%	4	0.00020137	0.742658	0.126128	0.411111	1.151202	1.044569	1.467622
	0.025%	5	0.00021203	0.056526	0.518091	0.501648	0.8727	-0.2984	1.3200365
	0.030%	6	0.00021631	0.868846	-0.05831	-0.4341	1.297565	0.791687	0.7530448
	0.035%	7	0.00022295	0.613249	-0.41117	-0.25805	0.749075	-0.3784	-0.035583
	0.040%	8	0.00024475	0.456605	0.043973	-0.09974	0.944246	-0.32678	0.4131459
	0.045%	9	0.00027409	0.150693	-0.16313	-0.10622	1.132936	1.170612	1.4904573
	0.050%	10	0.00030844	0.215645	0.012388	-0.07685	1.241443	-0.45481	-0.9662519
	0.055%	11	0.00031283	0.063837	0.110971	0.130791	0.931443	0.352256	-0.2404353
	0.060%	12	0.00034332	0.120755	-0.18124	-0.20751	0.652594	0.539286	-0.7015764
	0.065%	13	0.0003529	0.436012	-0.06859	-0.19201	0.849163	-0.70557	0.8174023
	0.070%	14	0.00036464	1.265161	0.463404	-0.14125	1.433787	-0.41993	-0.1010429
	0.075%	15	0.00038062	0.086184	-0.02564	-0.00235	0.81075	0.485371	-0.064692
	0.080%	16	0.00047647	0.633269	0.097038	0.215927	0.563217	0.71288	0.3141236
	0.085%	17	0.00061048	1.560183	-0.22937	0.417173	1.243209	0.637782	0.657201
	0.090%	18	0.00067779	0.07025	0.00613	0.033714	1.177952	-0.32895	0.1540026
	0.095%	19	0.00072327	0.562222	0.014447	0.273208	1.380738	0.427604	-0.122605
	0.100%	20	0.0007703	0.679471	0.00338	-0.24866	1.112791	-0.40351	-0.2875349
	0.105%	21	0.00077636	1.470746	-0.20982	0.123357	0.679616	0.156059	0.090655
	0.110%	22	0.00077881	0.061047	0.097434	0.120383	1.127744	1.989332	0.152995
	0.115%	23	0.00080831	0.231522	-0.15937	-0.06896	1.171582	1.396793	0.689149
	0.120%	24	0.00083474	0.335568	-0.04094	0.072685	1.015809	0.801397	0.5317407
	0.125%	25	0.00085465	0.707411	0.114178	0.305916	0.813127	0.014575	0.4111452
	0.130%	26	0.00086051	0.838946	-0.28057	-0.53273	0.901703	1.53299	0.0789159
	0.135%	27	0.00086359	0.38949	0.478431	0.599406	0.931796	0.646994	1.6430896
	0.140%	28	0.00091566	0.969706	0.461818	0.126972	1.03592	0.224819	-0.145282
	0.145%	29	0.00099802	0.342047	0.007204	-0.09484	0.894974	1.128895	-0.8879697

K	L	M	N	O	P	Q	R	S	
<b>SUMMARIZE SKEW3 FOR N = 10</b> ----- Paste Special Values -----									1
<b>Coef.Var.</b>	<b>Percentile</b>	<b>Average</b>	<b>Trial #1</b>	<b>Trial #2</b>	<b>Trial #3</b>	<b>Trial #4</b>	<b>Trial #5</b>	<b>Trial #6</b>	2
0.0069	80th	0.7682	0.770	0.771	0.765	0.760	0.775	0.768	3
0.0069	90th	0.9678	0.971	0.967	0.963	0.959	0.978	0.969	4
0.0068	95th	1.1275	1.133	1.124	1.130	1.119	1.139	1.120	5
0.0074	97.5	1.2648	1.277	1.266	1.258	1.252	1.273	1.262	6
0.0085	99th	1.4088	1.428	1.405	1.400	1.394	1.414	1.412	7
0.0121	99.5	1.5066	1.534	1.513	1.478	1.500	1.507	1.508	8
K4 =STDEV(N4:S4)/M4					M4 =AVERAGE(N4:S4)				9
10									
11									

**Compare Schield results with Doane and Steward (2011):**

<http://www.amstat.org/publications/jse/v19n2/doane.pdf>

90th	Doane	Schield	%Diff	
N=10	0.9629	0.9678	0.5081%	=(N15-M15)/M15

S3	S4	S5	S6	S7	S8	S9	S10
0.109224	-0.17801	0.131864	0.163032	0.99257	0.934089	-0.71073	-0.22362
-1.24394	-1.20459	0.052523	1.076428	2.234247	-0.29161	0.773099	-0.80732
0.12084	1.831417	0.391392	1.564696	0.052837	0.574368	-0.57855	-1.17005
0.995262	-1.7817	0.116308	-0.31815	-1.83233	0.705913	0.83986	0.023919
0.178228	-0.84443	0.152827	1.748432	0.825067	1.080601	1.37954	-0.36099
-0.61759	-0.74284	-0.68913	-0.25061	-1.89241	-1.3183	2.551928	0.831153
0.001026	0.462502	0.026611	-2.28704	-0.84035	-0.45503	-0.46777	-0.1377
-1.58178	1.709634	0.388952	1.18978	-0.4373	-0.25805	-0.71644	0.058561
-0.42543	-0.63542	-2.00881	-1.48	0.25645	0.694581	-0.90675	0.212978
-0.98387	2.959463	-1.52949	-0.28928	0.582577	0.331503	0.338462	0.135585
0.404219	0.694033	-0.09067	-0.92457	1.768881	-0.9196	1.096907	-1.03131
-0.18209	-0.23293	-0.91139	0.44328	-1.02947	0.541775	-0.79977	0.520446
0.607679	-0.52215	1.400177	0.191238	-0.48839	-0.66004	-1.43064	0.10438
3.939369	-0.18146	-0.92205	-0.23461	0.291262	1.778709	-0.32385	0.807646
0.79405	-0.05991	-1.59994	-0.40402	0.690716	-1.0341	0.055204	0.880905
-0.44629	-0.39528	-0.17881	0.36197	-0.87975	0.11773	0.912109	0.451693
0.564904	-0.66829	1.075199	-1.66034	-2.761	0.410055	-0.9735	0.424292
-1.45915	1.05922	0.155999	-2.12667	1.196082	-0.08657	1.748499	-0.25115
-1.56775	-2.6132	1.395461	1.624439	0.123012	-0.95444	0.423403	1.408549
-0.25527	-0.24204	0.891568	1.735555	-1.46883	-0.12119	1.638379	-1.45332
0.286243	-0.58076	-1.41873	-1.29061	0.453969	-0.33273	0.321523	0.216146
-0.063	0.75668	1.057861	0.204378	-0.11335	-2.25719	-0.84113	0.087771
-2.15507	-0.72795	-0.43908	-0.5943	0.943335	-1.72309	0.301166	0.715304
-0.38637	-0.67458	1.333208	-1.63107	0.953044	-0.68245	-1.26212	0.60781
0.571719	0.200687	0.539421	1.083504	-0.75451	1.053373	-1.46035	-0.51779
-0.84639	-0.69816	-1.20446	-0.5847	-0.48077	0.016901	-1.38903	0.768966
0.748773	-1.62265	1.658703	0.551818	-0.05686	0.805135	0.211812	0.197496
2.039677	0.320661	0.029124	-0.51286	2.009204	-0.87301	1.54687	-0.02103
-0.73472	-1.24982	-0.09465	0.660469	-0.69338	-0.09503	1.146336	0.891904