

Calc1Sheet

0.56 = Slope
 -17.78 = Intercept
 20.00 = Magnitude of Noise

0.58 = Calculated Slope $(SxSy - nSyx)/(Sx^2 - n^2Sxx)$
 -22.45 = Calculated Intercept $(Sy - m^2Sx)/n$

Count	Degree F x	Degree C y	Error	Measurement y'	Derived x*y'	Derived x*x
1	32.00	0.00	12.86	12.86	411.43	1024.00
2	37.00	2.78	4.97	7.75	286.75	1369.00
3	42.00	5.56	-14.54	-8.98	-377.23	1764.00
4	47.00	8.33	-12.70	-4.36	-205.09	2209.00
5	52.00	11.11	2.65	13.76	715.76	2704.00
6	57.00	13.89	-10.54	3.35	191.12	3249.00
7	62.00	16.67	-1.40	15.27	946.57	3844.00
8	67.00	19.44	-6.55	12.89	863.68	4489.00
9	72.00	22.22	-10.73	11.50	827.71	5184.00
10	77.00	25.00	1.84	26.84	2066.49	5929.00
11	82.00	27.78	1.60	29.38	2409.03	6724.00
12	87.00	30.56	6.17	36.73	3195.18	7569.00
13	92.00	33.33	-11.67	21.66	1993.01	8464.00
14	97.00	36.11	9.82	45.94	4455.70	9409.00
15	102.00	38.89	7.45	46.34	4726.91	10404.00
16	107.00	41.67	-19.03	22.63	2421.82	11449.00
17	112.00	44.44	3.71	48.16	5393.51	12544.00
18	117.00	47.22	-14.28	32.94	3853.90	13689.00
19	122.00	50.00	1.50	51.50	6283.45	14884.00
20	127.00	52.78	1.63	54.41	6909.45	16129.00
21	132.00	55.56	-2.67	52.89	6981.24	17424.00
22	137.00	58.33	-6.92	51.41	7043.64	18769.00
23	142.00	61.11	-7.24	53.87	7649.88	20164.00
24	147.00	63.89	-15.37	48.52	7131.89	21609.00
25	152.00	66.67	1.13	67.80	10305.35	23104.00
26	157.00	69.44	13.59	83.04	13036.96	24649.00
27	162.00	72.22	4.70	76.92	12461.33	26244.00
28	167.00	75.00	9.61	84.61	14129.85	27889.00
29	172.00	77.78	-4.81	72.97	12550.25	29584.00
30	177.00	80.56	-11.90	68.65	12151.93	31329.00
31	182.00	83.33	0.30	83.63	15220.65	33124.00
32	187.00	86.11	-18.47	67.64	12649.07	34969.00
33	192.00	88.89	8.72	97.61	18741.26	36864.00
34	197.00	91.67	8.38	100.05	19709.17	38809.00
35	202.00	94.44	-0.95	93.50	18886.49	40804.00
36	207.00	97.22	18.38	115.60	23929.92	42849.00
37	212.00	100.00	-3.03	96.97	20557.85	44944.00

= Sum_x

4514.00 = Sum_x
 1796.24 = Sum_y'
 280505.87 = Sum_xy'
 656158.00 = Sum_x2

Theory vs. Data

Temperature Conversion

