

SecondOrderPolynomial

Curve Fit on Noisy Data to retrieve the coefficients

$cn^0 + bn^1 + an^2$
 1.00 = a 1.00211
 2.00 = b -13.1327
 3.00 = c 10853.7
 50000.00 = Noise

# Data Points	N^0	N^1	N^2	Tim or #Ops	Noise	Measurement with Noise	Calculated from Noise
1	1	100.00	10000.00	10203.00	31867.29	42070.29	19561.53
2	1	115.25	13283.54	13517.05	-37124.06	-23607.01	22851.67
3	1	130.51	17032.46	17296.48	28967.33	46263.81	26208.17
4	1	145.76	21246.77	21541.29	9135.99	30677.28	30231.04
5	1	161.02	25926.46	26251.49	-18771.60	7479.89	34720.28
6	1	176.27	31071.53	31427.07	31500.37	62927.44	39675.88
7	1	191.53	36681.99	37068.04	19348.69	56416.73	45097.84
8	1	206.78	42757.83	43174.39	49139.85	92314.24	50986.17
9	1	222.03	49299.05	49746.12	35339.73	85085.85	57340.87
10	1	237.29	56305.66	56783.24	-46767.00	10016.23	64161.93
11	1	252.54	63777.65	64285.73	-27007.42	37278.31	71449.36
12	1	267.80	71715.02	72253.62	-12640.19	59613.43	79203.15
13	1	283.05	80117.78	80686.88	8092.52	88779.40	87423.31
14	1	298.31	88985.92	89585.53	25589.78	115175.31	96109.83
15	1	313.56	98319.45	98949.57	-16211.96	82737.60	105262.72
16	1	328.81	108118.36	108778.98	-14036.56	94742.43	114881.98
17	1	344.07	118382.65	119073.78	14176.23	133250.01	124967.60
18	1	359.32	129112.32	129833.97	-5052.90	124781.07	135519.58
19	1	374.58	140307.38	141059.54	44968.18	186027.72	146537.93
20	1	389.83	151967.83	152750.49	-47732.61	105017.87	158022.65
21	1	405.08	164093.65	164906.82	42814.46	207721.28	169973.73
22	1	420.34	176684.86	177528.54	44308.67	221837.21	182391.18
23	1	435.59	189741.45	190615.64	18172.67	208788.31	195274.99
24	1	450.85	203263.43	204168.12	23779.93	227948.05	208625.17
25	1	466.10	217250.79	218185.99	1172.69	219358.68	222441.72
26	1	481.36	231703.53	232669.25	-8472.70	224196.55	236724.62
27	1	496.61	246621.66	247617.88	45931.92	293549.80	251473.90
28	1	511.86	262005.17	263031.90	4314.58	267346.48	266689.54
29	1	527.12	277854.06	278911.30	38597.43	317508.74	282371.55
30	1	542.37	294168.34	295256.09	-34548.55	260707.54	298519.92
31	1	557.63	310948.00	312066.26	-38257.67	273808.58	315134.65
32	1	572.88	328193.05	329341.81	-17923.01	311418.80	332215.76
33	1	588.14	345903.48	347082.75	27578.75	374661.50	349763.22
34	1	603.39	364079.29	365289.07	-30234.86	335054.21	367777.06
35	1	618.64	382720.48	383960.77	8876.82	392837.59	386257.26
36	1	633.90	401827.06	403097.86	3974.05	407071.91	405203.82
37	1	649.15	421399.02	422700.33	-42938.74	379761.59	424616.75
38	1	664.41	441436.37	442768.18	33212.50	475980.68	444496.04
39	1	679.66	461939.10	463301.42	45340.23	508641.65	464841.71
40	1	694.92	482907.21	484300.04	-2577.83	481722.21	485653.73
41	1	710.17	504340.71	505764.05	-20159.21	485604.84	506932.12
42	1	725.42	526239.59	527693.43	28891.39	556584.83	528676.88
43	1	740.68	548603.85	550088.21	6607.63	556695.83	550888.00
44	1	755.93	571433.50	572948.36	-47368.23	525580.13	573565.49
45	1	771.19	594728.53	596273.90	38553.67	634827.56	596709.34
46	1	786.44	618488.94	620064.82	-15368.36	604696.46	620319.56
47	1	801.69	642714.74	644321.13	-44823.36	599497.76	644396.15
48	1	816.95	667405.92	669042.82	7727.15	676769.96	668939.10
49	1	832.20	692562.48	694229.89	-1696.20	692533.68	693948.41
50	1	847.46	718184.43	719882.35	-1954.42	717927.93	719424.09
51	1	862.71	744271.76	746000.18	-8483.99	737516.19	745366.14
52	1	877.97	770824.48	772583.41	44861.96	817445.37	771774.55
53	1	893.22	797842.57	799632.01	-41334.30	758297.71	798649.33
54	1	908.47	825326.06	827146.00	-4725.51	822420.50	825990.47
55	1	923.73	853274.92	855125.38	-1124.59	854000.79	853797.98
56	1	938.98	881689.17	883570.14	21053.31	904623.45	882071.85
57	1	954.24	910568.80	912480.28	15035.23	927515.51	910812.09
58	1	969.49	939913.82	941855.80	-6425.83	935429.97	940018.69
59	1	984.75	969724.22	971696.71	6929.36	978626.06	969691.66
60	1	1000.00	1000000.00	1002003.00	-13322.71	988680.29	999831.00

Second Order Polynomial with Noise

