

							=\$M\$27+ (B3*\$M\$28)+ (C3*\$M\$29)+ (D3*\$M\$30)+ (E3*\$M\$31)+ (F3*\$M\$32)+ (G3*\$M\$33)				
carat	depth	table	price	x	y	z	predict	error	error^2	Multiple Linear Regression	
0.23	61.5	55	326	3.95	3.98	2.43	0.11539047	-0.11460953	0.013135343		
0.21	59.8	61	326	3.89	3.84	2.31	0.09135677	-0.11864323	0.014076217	carat = f(depth, table, price, x, y, z)	
0.23	56.9	65	327	4.05	4.07	2.31	0.10542332	-0.12457668	0.015519349	carat = b0 + b1*(depth) + b2*(table) + b3*(price) + b4*(x) + b5*(y) + b6*(z)	
0.29	62.4	58	334	4.2	4.23	2.63	0.22270237	-0.06729763	0.00452897		
0.31	63.3	58	335	4.34	4.35	2.75	0.28245805	-0.02754195	0.000758559	Sum error 366.651 =SUM(J3:J53942) < the best minimize	
0.24	62.8	57	336	3.94	3.96	2.48	0.1453311	-0.0946689	0.008962201		
0.24	62.3	57	336	3.95	3.98	2.47	0.13927245	-0.10072755	0.01014604	RMSE 0.082 =SQRT(AVERAGE(J3:J53942))	
0.26	61.9	55	337	4.07	4.11	2.53	0.16028295	-0.09971705	0.009943491		
0.22	65.1	61	337	3.87	3.78	2.49	0.18296363	-0.03703637	0.001371693		
0.23	59.4	61	338	4	4.05	2.39	0.11904332	-0.11095668	0.012311384		
0.3	64	55	339	4.25	4.28	2.73	0.25463188	-0.04536812	0.002058266		
0.23	62.8	56	340	3.93	3.9	2.46	0.13763304	-0.09236696	0.008531656		
0.22	60.4	61	342	3.88	3.84	2.33	0.09991491	-0.12008509	0.014420429		
0.31	62.2	54	344	4.35	4.37	2.71	0.24803011	-0.06196989	0.003840268		
0.2	60.2	62	345	3.79	3.75	2.27	0.07291754	-0.12708246	0.016149951		
0.32	60.9	58	345	4.38	4.42	2.68	0.25108528	-0.06891472	0.004749238		
0.3	62	54	348	4.31	4.34	2.68	0.23218015	-0.06781985	0.004599532		
0.3	63.4	54	351	4.23	4.29	2.7	0.23358237	-0.06641763	0.004411301		
0.3	63.8	56	351	4.23	4.26	2.71	0.24955107	-0.05044893	0.002545095		
0.3	62.7	59	351	4.21	4.27	2.66	0.23648226	-0.06351774	0.004034503		
0.3	63.3	56	351	4.26	4.3	2.71	0.24966846	-0.05033154	0.002533263		
0.23	63.8	55	352	3.85	3.92	2.48	0.1280261	-0.1019739	0.010398677		
0.23	61	57	353	3.94	3.96	2.41	0.11269857	-0.11730143	0.013759627		
0.31	59.4	62	353	4.39	4.43	2.62	0.24435653	-0.06564347	0.004309065		
0.31	58.1	62	353	4.44	4.47	2.59	0.23575967	-0.07424033	0.005511627		
0.23	60.4	58	354	3.97	4.01	2.41	0.11547199	-0.11452801	0.013116664		
0.24	62.5	57	355	3.97	3.94	2.47	0.14934078	-0.09065922	0.008219093		
0.3	62.2	57	357	4.28	4.3	2.67	0.24001807	-0.05998193	0.003597832		
0.23	60.5	61	357	3.96	3.97	2.4	0.12731067	-0.10268933	0.010545098		
0.23	60.9	57	357	3.96	3.99	2.42	0.11723081	-0.11276919	0.01271689		
0.23	60	57	402	4	4.03	2.41	0.11445856	-0.11554144	0.013349824		
0.23	59.8	57	402	4.04	4.06	2.42	0.1230564	-0.1069436	0.011436933		
0.23	60.7	59	402	3.97	4.01	2.42	0.12695298	-0.10304702	0.010618688		
0.23	59.5	58	402	4.01	4.06	2.4	0.11286037	-0.11713963	0.013721693		
0.23	61.9	58	402	3.92	3.96	2.44	0.12923534	-0.10076466	0.010153518		
0.23	58.2	59	402	4.06	4.08	2.37	0.10853387	-0.12146613	0.01475402		
0.23	64.1	59	402	3.83	3.85	2.46	0.14623594	-0.08376406	0.007016418		
0.31	64	54	402	4.29	4.31	2.75	0.26456596	-0.04543404	0.002064252		
0.26	60.8	59	403	4.13	4.16	2.52	0.17820168	-0.08179832	0.006690964		
0.33	61.8	55	403	4.49	4.51	2.78	0.29022492	-0.03977508	0.001582057		
0.33	61.2	56	403	4.49	4.5	2.75	0.28348597	-0.04651403	0.002163555		
0.33	61.1	56	403	4.49	4.55	2.76	0.28198314	-0.04801686	0.002305619		
0.26	65.2	56	403	3.99	4.02	2.61	0.20287457	-0.05712543	0.003263315		
0.26	58.4	63	403	4.19	4.24	2.46	0.17020579	-0.08979421	0.008063		
0.32	63.1	56	403	4.34	4.37	2.75	0.27232143	-0.04767857	0.002273246		
0.29	62.4	58	403	4.24	4.26	2.65	0.23722807	-0.05277193	0.002784877		
0.32	61.8	55	403	4.35	4.42	2.71	0.24730939	-0.07269061	0.005283925		

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.984757181
R Square	0.969746706
Adjusted R Square	0.969743341
Standard Error	0.082451608
Observations	53940

ANOVA

	df	SS	MS	F	Significance F
Regression	6	11752.72277	1958.787128	288130.3304	0.00000
Residual	53933	366.6509738	0.006798268		
Total	53939	12119.37374			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-2.487423398	0.02274703	-109.3515679	0.00000	-2.532007758	-2.442839038
depth	0.018368491	0.000296597	61.93078929	0.00000	0.017787159	0.018949824
table	0.004397095	0.000170558	25.78061245	0.00000	0.0040628	0.004731391
price	0.000032420	0.000000192	169.085010066	0.00000	0.000032044	0.000032795
x	0.301606222	0.002009598	150.0828924	0.00000	0.297667395	0.305545049
y	0.006336437	0.00140562	4.507929514	0.00001	0.00358141	0.009091464
z	0.00171975	0.002440289	0.704732025	0.48098	-0.003063236	0.006502735