

John Cremona prepared three files with BSD data about elliptic curves. I typed

```
awk '$5==1' allbsd.1-8000 allbsd.8001-12000 allbsd.12001-20000 > rank1
```

to make the subset of his files that is about curves of rank 1. Then, using Python I ran the following commands:

```
f=open('rank1').read().split('\n'); x=[[eval(y.split()[9]),y] for y in f if len(y)>1]
for z in x[:50]:
    print z[0], z[1]
```

This resulted in the following output, which says that, assuming correctness of Cremona's allbsd files, for rank 1 optimal curves of conductor up to 20000, the four smallest regulators (hence heights) are approximately 0.00891432445569, 0.00903868188983, 0.00973986614291, and 0.00996410799991, which correspond to the optimal curves **3990V**, **3630Y**, **1430K**, and **1470L**. This is the same thing I send in my computation from 2001, except then I only looked at the data for conductors up to 12000.

0.00891432445569	3990	V	1	[1,1,1,-125615,61201397]	1	1	2310	0.231099534909928950
0.00903868188983	3630	Y	1	[1,0,0,-141875,18393057]	1	1	1785	0.354005577246171469
0.00973986614291	1430	K	1	[1,-1,1,-3057,133281]	1	1	390	0.677769781965174174
0.00996410799991	1470	L	1	[1,1,1,-2990,71147]	1	390	0.88588471246845036567	3.44
0.0112775268756	280	B	1	[0,0,0,-412,3316]	1	60	1.7288713939579846572	1.16
0.0114310356128	3822	GG	1	[1,0,0,-4923717,4228856001]	1	1	2380	0.192317007419718433
0.0115555824173	6510	CC	1	[1,0,0,-13465,839225]	1	1	1155	0.537593816694129087
0.0118509962179	1518	T	1	[1,0,0,-21736,875072]	1	660	0.50457068313817547454	3.94
0.0120687789943	1890	P	1	[1,-1,1,-1517,26709]	1	330	1.0434357482304609482	4.15
0.0122529773131	1830	L	1	[1,0,0,-8755,350177]	1	520	0.70022594790177803388	4.46
0.0128468084018	350	F	1	[1,-1,1,-180,1047]	1	66	1.9197624983313408116	1.62
0.0132435005474	6090	BB	1	[1,0,0,-10280,409152]	1	1	660	0.797604128047058369
0.0134167723091	735	F	1	[0,1,1,-310,3364]	1	84	1.2882643756245456697	1.45
0.0136447943354	1806	N	1	[1,0,0,-25757,320049]	1	715	0.42637776663439978253	4.15
0.0138351336607	7854	S	1	[1,0,0,-350636,80632464]	1	1	1440	0.356959373280602000
0.0154251315385	11730	O	1	[1,0,0,59419,1024262145]	1	1	3780	0.131697909144270383
0.0157652128495	14910	KK	1	[1,0,0,-28335,999225]	1	1	1320	0.447040067693894974
0.0157980969745	14430	QQ	1	[1,0,0,-273635,55620225]	1	1	1456	0.377611123814327804
0.0158333892356	600	E	1	[0,1,0,-233,1563]	1	84	1.6232936554871205389	2.15
0.0162515410815	4620	M	1	[0,1,0,-1964205,1059396975]	1	1	945	0.293309859589434272
0.0163345405553	17490	BB	1	[1,0,0,-1588010,774750372]	1	1	2310	0.2540919007
0.0166374352509	7098	FF	1	[1,0,0,-46381,4157009]	1	1	858	0.478255096538540302
0.0167027901704	2370	O	1	[1,0,0,-2255,44025]	1	280	1.0323246014331322338	4.82
0.0170027905533	7770	DD	1	[1,0,0,-1750,318500]	1	840	0.52889471446323561133	7.55
0.0173714666597	2970	DD	1	[1,-1,1,-372332,-54226961]	1	1	1365	0.198948325808411879
0.0174159649173	3930	F	1	[1,0,0,-28565,1872225]	1	1	504	0.671522134713009099
0.0174682919263	1302	M	1	[1,0,0,-1252,18704]	1	182	1.1506026777155425792	3.65
0.0184736827364	975	I	1	[0,1,1,-4758,128144]	1	84	0.94863094452940498496	1.47
0.0185237308473	430	D	1	[1,0,0,-1415,20617]	1	75	1.3842895617477883861	1.92
0.0188330248451	7350	ZZZ	1	[1,0,0,-2213,146817]	1	1	594	0.630506028552253683

0.0188535339486	2550	FF	1	[1,0,0,-1938,25092]	1	1	273	0.94803369856612801525	4.87
0.0191397373282	1110	M	1	[1,0,0,-281,2361]	1	1	126	1.4588941518522167657	3.51
0.0192477773539	1020	H	1	[0,1,0,-170,6225]	1	1	135	1.0311221246729365197	2.67
0.0196779110608	4998	II	1	[1,0,0,4409,496649]	1	1	702	0.43742902444997005139	6.04
0.0197560590057	19950	ZZZ	1	[1,0,0,2031662,8219116292]	1	1	1	1	5460 0.8875130571
0.0198380094718	2090	O	1	[1,1,1,-3345,74095]	1	1	168	1.1032029171452321554	3.67
0.0202709581589	17850	III	1	[1,0,0,-7438,421892]	1	1	1	780	0.574372298541955972
0.0204000948681	7350	HHH	1	[1,0,0,-15338,1952292]	1	1	1	840	0.419886493540835606
0.0205680114567	190	A	1	[1,-1,1,-48,147]	1	1	22	2.7276120737371510762	1.23
0.0207213852547	2040	Q	1	[0,1,0,-2840,81813]	1	1	210	0.78718172805606131971	3.42
0.0209484131629	1770	G	1	[1,0,0,-721,15401]	1	1	208	0.96722218201890535126	4.21
0.0209841213184	494	D	1	[1,1,1,-1001,12375]	1	1	78	1.3176510859323960851	2.15
0.0213990182956	6222	E	1	[1,0,0,-265965,212681169]	1	1	1	1680	0.186385221433472502
0.0214001480068	550	I	1	[1,1,1,-2213,39531]	1	1	84	1.2639033911075527953	2.27
0.021448892363	345	F	1	[0,1,1,-100,406]	1	1	24	2.0934610738452118798	1.07
0.0215541166685	3450	BB	1	[1,0,0,-2163,24417]	1	1	288	0.87366006584511654692	5.42
0.0218747424901	6468	T	1	[0,1,0,-22682,1438569]	1	1	1	330	0.559690984151137825
0.022332352336	1590	S	1	[1,0,0,-406,3620]	1	1	126	1.4482385313657895336	4.07
0.0224686032667	618	F	1	[1,0,0,-185,1401]	1	1	77	1.5379775186464285799	2.66
0.0227175485369	7770	CC	1	[1,0,0,-281490,80204292]	1	1	1	1300	0.251557673430263463