

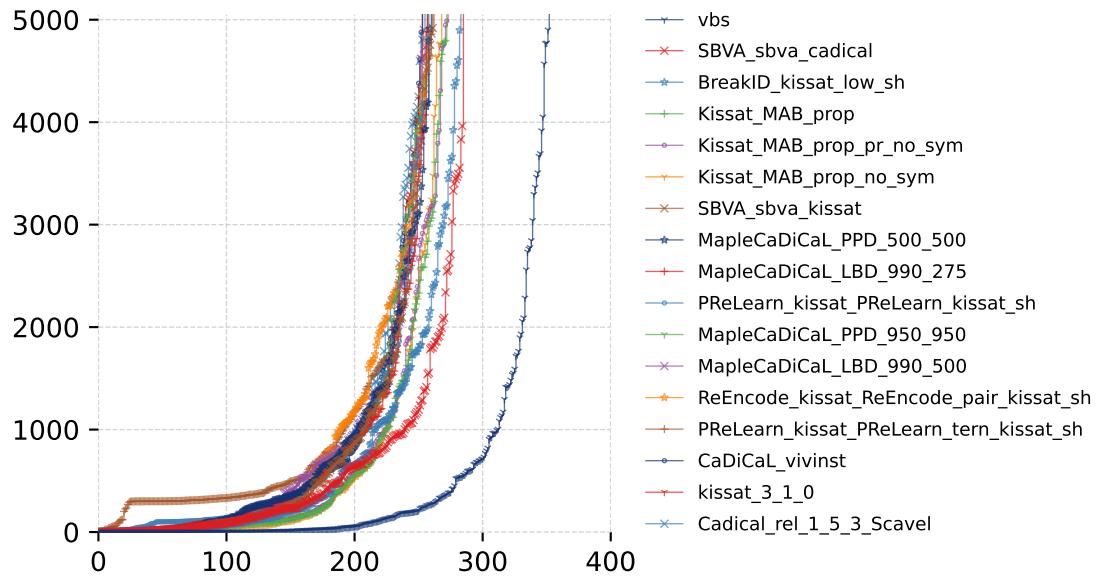
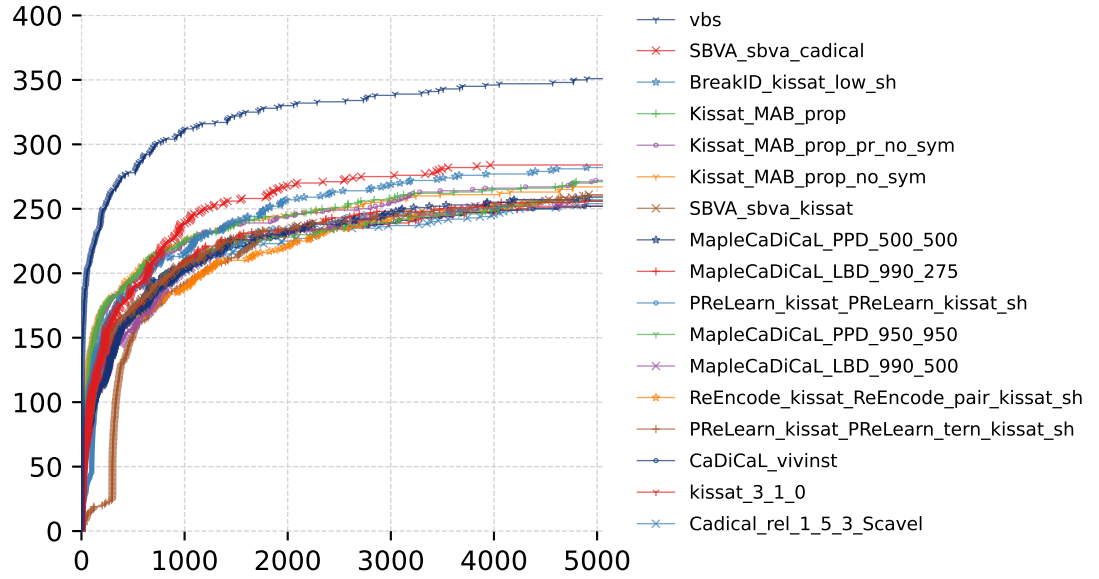
# SAT Competition 2023

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Evaluation is based on solver runtimes in SAT Competition 2023 without the checker-timeout penalty in order to compare the pure proof-production performance of solvers.

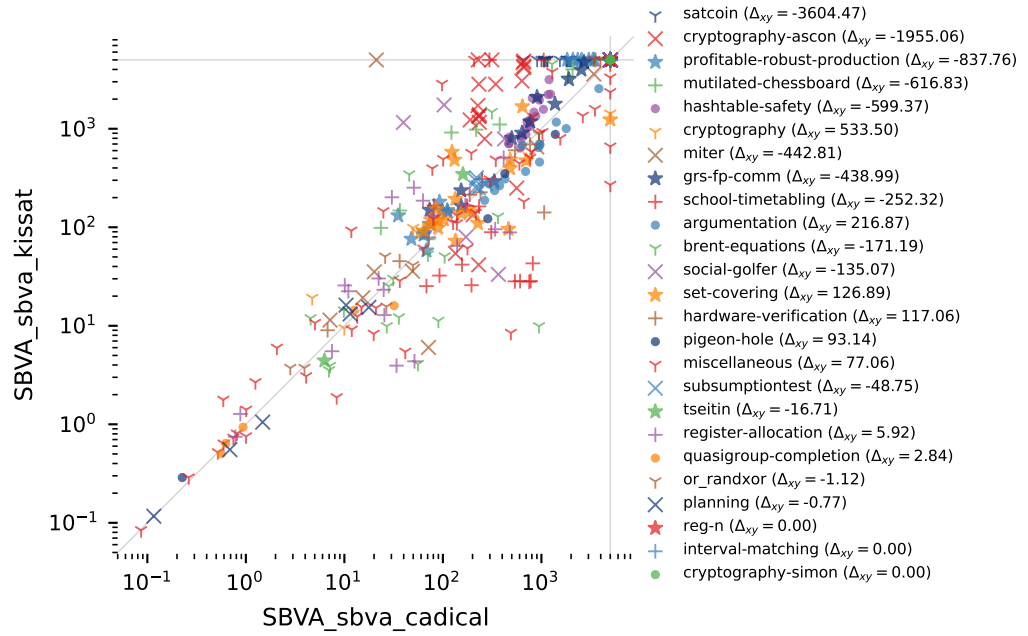
At the same time, this is a sample document for testing and showing how to use the evaluation functions in this repository.

# 1 CDF and Cactus Plots



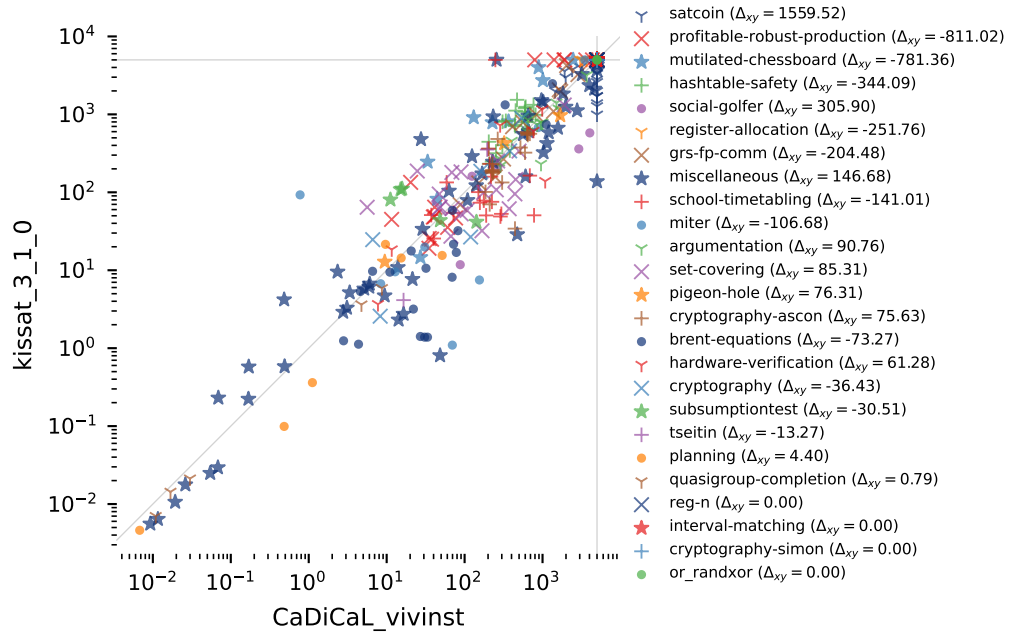
## 2 SBVA-CaDiCaL vs. SBVA-Kissat

Family	Count	SBVA CaDiCaL	SBVA Kissat	VBS
Miscellaneous	70	3071.07	<b>2779.72</b>	2356.70
Argumentation	20	3693.93	<b>3477.05</b>	3475.19
Profitable-Robust-Production	20	<b>2470.42</b>	5058.18	2469.91
Social-Golfer	20	<b>7555.16</b>	7690.23	7533.95
Cryptography-Ascon	20	<b>356.82</b>	2811.89	324.37
Set-Covering	20	722.01	<b>345.13</b>	238.27
Hashtable-Safety	20	<b>797.46</b>	1396.84	797.46
Interval-Matching	20	<b>10000.00</b>	<b>10000.00</b>	10000.00
Register-Allocation	20	101.20	<b>95.28</b>	61.05
School-Timetabling	19	<b>1399.65</b>	2178.28	1187.72
Brent-Equations	19	<b>232.86</b>	404.04	153.79
Cryptography-Simon	17	<b>10000.00</b>	<b>10000.00</b>	10000.00
Grs-Fp-Comm	17	<b>3649.90</b>	4088.89	3647.53
Satcoin	15	<b>1395.53</b>	10000.00	1395.53
Mutilated-Chessboard	12	<b>3194.54</b>	4228.03	3194.54
Tseitin	11	<b>8196.91</b>	8213.62	8196.74
Miter	11	<b>3134.91</b>	4032.27	3105.64
Pigeon-Hole	8	5261.85	<b>5168.71</b>	5168.70
Hardware-Verification	8	2832.05	<b>2714.99</b>	2705.49
Cryptography	7	1578.46	<b>330.68</b>	316.73
Planning	6	<b>6.97</b>	7.75	6.49
Quasigroup-Completion	5	9.33	<b>6.49</b>	6.12
Reg-N	5	<b>10000.00</b>	<b>10000.00</b>	10000.00
Subsumptiontest	5	<b>230.22</b>	278.97	230.22
Or_Randxor	5	<b>21.82</b>	22.94	17.87
All	400	<b>3257.62</b>	3882.65	3051.46



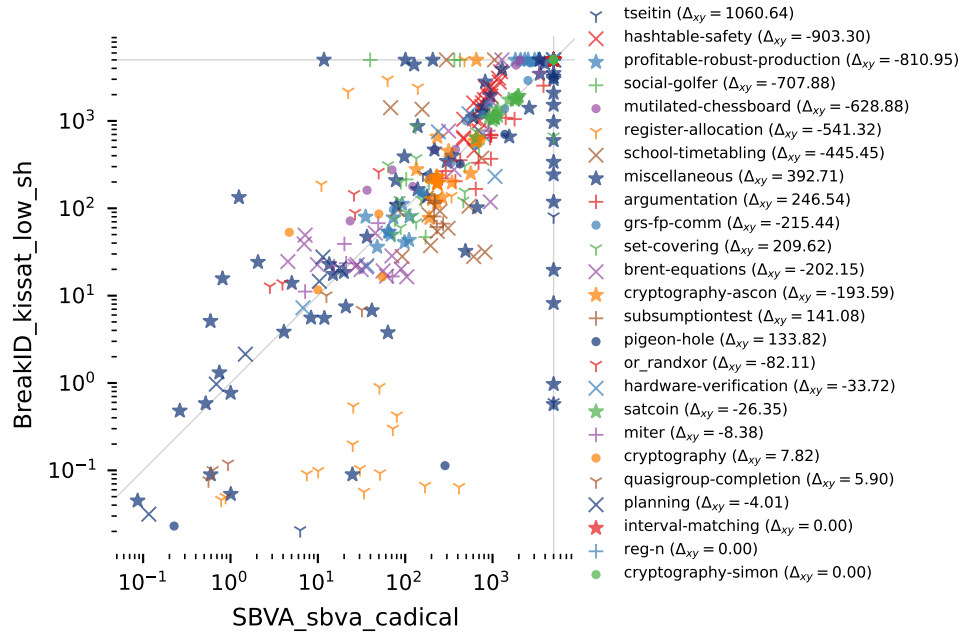
### 3 CaDiCaL-vivinst vs. Kissat-3.1.0

Family	Count	Cadical.Vivinst	Kissat_3.1.0	VBS
Miscellaneous	70	3140.29	<b>2779.33</b>	2601.18
Argumentation	20	3688.69	<b>3597.93</b>	3566.72
Profitable-Robust-Production	20	<b>2463.60</b>	5024.62	2458.96
Social-Golfer	20	7871.79	<b>7565.89</b>	7564.08
Cryptography-Ascon	20	378.92	<b>303.29</b>	284.36
Set-Covering	20	259.73	<b>174.42</b>	149.20
Hashtable-Safety	20	<b>460.96</b>	805.04	458.63
Interval-Matching	20	<b>10000.00</b>	<b>10000.00</b>	10000.00
Register-Allocation	20	<b>8998.24</b>	10000.00	8998.24
School-Timetabling	19	<b>1264.86</b>	1669.03	1141.51
Brent-Equations	19	<b>176.54</b>	249.81	137.45
Cryptography-Simon	17	<b>10000.00</b>	<b>10000.00</b>	10000.00
Grs-Fp-Comm	17	<b>3659.80</b>	3864.28	3632.29
Satcoin	15	7388.71	<b>2495.86</b>	2129.11
Mutilated-Chessboard	12	<b>2933.52</b>	4131.55	2932.48
Tseitin	11	<b>8201.03</b>	8214.31	8199.91
Miter	11	<b>3149.19</b>	3710.41	3109.62
Pigeon-Hole	8	6502.28	<b>6425.97</b>	6412.68
Hardware-Verification	8	2893.13	<b>2831.85</b>	2755.54
Cryptography	7	<b>1602.26</b>	1638.69	1582.76
Planning	6	13.03	<b>8.63</b>	6.66
Quasigroup-Completion	5	2.70	<b>1.91</b>	1.91
Reg-N	5	<b>10000.00</b>	<b>10000.00</b>	10000.00
Subsumptiontest	5	<b>46.47</b>	76.98	25.46
Or_Randxor	5	<b>10000.00</b>	<b>10000.00</b>	10000.00
All	400	<b>4048.63</b>	4050.74	3709.67



## 4 SBVA-CaDiCaL vs. BreakId

Family	Count	SBVA CaDiCaL	Breakid_Kissat_Low_Sh	VBS
Miscellaneous	70	3071.07	<b>1964.08</b>	1245.85
Argumentation	20	3693.93	<b>3447.39</b>	3446.95
Profitable-Robust-Production	20	<b>2470.42</b>	5031.37	2460.03
Social-Golfer	20	<b>7555.16</b>	9013.05	7548.93
Cryptography-Ascon	20	<b>356.82</b>	800.41	297.61
Set-Covering	20	722.01	<b>262.39</b>	188.29
Hashtable-Safety	20	<b>797.46</b>	1700.77	789.68
Interval-Matching	20	<b>10000.00</b>	<b>10000.00</b>	10000.00
Register-Allocation	20	<b>101.20</b>	892.52	42.72
School-Timetabling	19	<b>1399.65</b>	2371.42	1234.90
Brent-Equations	19	<b>232.86</b>	698.16	168.16
Cryptography-Simon	17	<b>10000.00</b>	<b>10000.00</b>	10000.00
Grs-Fp-Comm	17	<b>3649.90</b>	3865.34	3638.10
Satcoin	15	<b>1395.53</b>	1421.87	1370.56
Mutilated-Chessboard	12	<b>3194.54</b>	4240.09	3194.54
Tseitin	11	8196.91	<b>5772.63</b>	5764.96
Miter	11	<b>3134.91</b>	3143.29	3118.73
Pigeon-Hole	8	5261.85	<b>5128.03</b>	5128.03
Hardware-Verification	8	<b>2832.05</b>	2865.77	2717.96
Cryptography	7	1578.46	<b>1570.64</b>	1554.56
Planning	6	<b>6.97</b>	10.98	6.96
Quasigroup-Completion	5	9.33	<b>3.43</b>	3.43
Reg-N	5	<b>10000.00</b>	<b>10000.00</b>	10000.00
Subsumptiontest	5	230.22	<b>89.14</b>	89.14
Or_Randxor	5	<b>21.82</b>	103.93	21.82
All	400	<b>3257.62</b>	3376.88	2805.19





## 5 Family-wise CDF Plots

