

THIS DOCUMENT IS THE ONLINE-ONLY APPENDIX TO:

## Breaking Up is Hard to Do: An Evaluation of Automated Assume-Guarantee Reasoning

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This appendix provides detailed data for the experiments described in Section 4. Each table in this appendix gives information about the performance of monolithic verification, assume-guarantee reasoning using the generalized decompositions based on the best decomposition from size 2, and assume-guarantee reasoning using the best decomposition we were able to find. Recall that we imposed a time bound when exploring some decompositions, as described in Section 4.4.1, and for those subjects where this bound was reached, the best-known decomposition may not be the best decomposition that exists for that subject.

The Time rows give the number of seconds needed for verification. The  $|P|$  rows give the number of states in the property that was checked. The States rows give the number of states explored during verification. For the generalized decomposition and the best decomposition, this number is the maximum number of states explored by a verifier when answering a query or a conjecture of the  $L^*$  algorithm. If the number of the states used by the best decomposition is preceded by a star, this means that the number of states is for the best-known decomposition, but there may be a better decomposition that explores fewer states.

In the data for FLAVERS for subject 23 at size 3, the number of states explored by the best decomposition at size 3 is preceded by a greater than sign. This denotes the fact that while none of the decompositions at size 3 completed within the time bound we used, we know that the best decomposition for this property explores at least 100,000 states. We show the number of states as “OOM” in the cases where the verifier ran out of memory. For the Best decomposition columns, we show the number of states as “—” in those cases where we did not attempt to find the best decomposition.

Some rows show data specific to assume-guarantee reasoning. The Premise 1 States and Premise 2 States rows give the number of states explored while verifying Premise 1 and Premise 2, respectively. The  $|A|$  rows give the size of the learned assumption. The  $|S_1|$  and  $|S_2|$  rows give the number of nodes in  $|S_1|$  and  $|S_2|$  respectively. We do not report the size of  $|S_1|$  and  $|S_2|$  for LTSA because the LTSA models are built on the fly. Thus,  $S_1$  and  $S_2$  are never built independently, but are always built composed with some other assumption or property.

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The majority of these experiments were run on an Intel Xeon 2.2GHz machine with 4Gb of memory (although a single process could only access 2Gb of memory). This system was running RedHat Linux version 8.0 with Sun's JDK version 1.5.0\_04-b05. The LTSA data for the Chiron multiple, Gas Station, Relay, and Smokers systems were from executions on an Intel Pentium 4 3.2GHz machine with 2Gb of memory. This system was running Fedora Core 2 with Sun's JDK version 1.5.0\_06-b05.

## A. FLAVERS DATA

### A.1 Subject 1

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	1		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.91	1.32	1.32
<b>States:</b>	724	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		127	127
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		51	51
<b> S<sub>2</sub> :</b>		127	127

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	1		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.36	1.77	1.77
<b>States:</b>	2,294	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		238	238
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		51	51
<b> S<sub>2</sub> :</b>		238	238

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	1		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.90	2.93	2.93
<b>States:</b>	5,922	401	401
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		401	401
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		401	401

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	1		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6.83	6.97	—
<b>States:</b>	13,774	654	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		654	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		654	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	1		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	21.50	22.17	—
<b>States:</b>	28,568	995	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		995	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		995	

## A.2 Subject 2

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	2		
<b>Size:</b>	2		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.18	1.76	1.76
<b>States:</b>	2,756	3,351	3,351
<b>Premise 1 States:</b>		3,351	3,351
<b>Premise 2 States:</b>		74	74
$ A $ :		1	1
$ S_1 $ :		172	172
$ S_2 $ :		74	74

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	2		
<b>Size:</b>	3		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.12	5.50	5.50
<b>States:</b>	22,938	35,513	35,513
<b>Premise 1 States:</b>		35,513	35,513
<b>Premise 2 States:</b>		121	121
$ A $ :		1	1
$ S_1 $ :		445	445
$ S_2 $ :		121	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	2		
<b>Size:</b>	4		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	26.34	29.93	29.93
<b>States:</b>	202,259	320,239	320,239
<b>Premise 1 States:</b>		320,239	320,239
<b>Premise 2 States:</b>		156	156
$ A $ :		1	1
$ S_1 $ :		1,041	1,041
$ S_2 $ :		156	156

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	2		
<b>Size:</b>	5		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	501.10	381.14	—
<b>States:</b>	2,014,415	3,498,885	
<b>Premise 1 States:</b>		3,498,885	
<b>Premise 2 States:</b>		203	
$ A $ :		1	
$ S_1 $ :		2,279	
$ S_2 $ :		203	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	2		
<b>Size:</b>	6		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	12,109.85	6,180.33	—
<b>States:</b>	21,681,290	37,530,117	
<b>Premise 1 States:</b>		37,530,117	
<b>Premise 2 States:</b>		238	
$ A $ :		1	
$ S_1 $ :		4,601	
$ S_2 $ :		238	

## A.3 Subject 3

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	3		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.93	1.38	1.38
<b>States:</b>	877	1,316	1,316
<b>Premise 1 States:</b>		1,316	1,316
<b>Premise 2 States:</b>		74	74
$ A $ :		1	1
$ S_1 $ :		104	104
$ S_2 $ :		74	74

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	3		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.38	2.95	2.95
<b>States:</b>	2,751	4,976	4,976
<b>Premise 1 States:</b>		4,976	4,976
<b>Premise 2 States:</b>		121	121
$ A $ :		1	1
$ S_1 $ :		204	204
$ S_2 $ :		121	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	3		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.04	5.32	5.32
<b>States:</b>	6,751	12,028	12,028
<b>Premise 1 States:</b>		12,028	12,028
<b>Premise 2 States:</b>		156	156
$ A $ :		1	1
$ S_1 $ :		356	356
$ S_2 $ :		156	156

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	3		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	7.28	13.43	—
<b>States:</b>	14,543	27,558	
<b>Premise 1 States:</b>		27,558	
<b>Premise 2 States:</b>		203	
$ A $ :		1	
$ S_1 $ :		598	
$ S_2 $ :		203	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	3		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	23.68	37.19	—
<b>States:</b>	27,613	51,156	
<b>Premise 1 States:</b>		51,156	
<b>Premise 2 States:</b>		238	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		928	
<b> S<sub>2</sub> :</b>		238	

## A.4 Subject 4

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	4		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.93	1.30	1.30
<b>States:</b>	688	1,009	1,009
<b>Premise 1 States:</b>		1,009	1,009
<b>Premise 2 States:</b>		74	74
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		104	104
<b> S<sub>2</sub> :</b>		74	74

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	4		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.40	2.37	2.37
<b>States:</b>	2,048	3,709	3,709
<b>Premise 1 States:</b>		3,709	3,709
<b>Premise 2 States:</b>		121	121
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		204	204
<b> S<sub>2</sub> :</b>		121	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	4		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.96	5.46	5.46
<b>States:</b>	4,818	8,613	8,613
<b>Premise 1 States:</b>		8,613	8,613
<b>Premise 2 States:</b>		156	156
$ A $ :		1	1
$ S_1 $ :		356	356
$ S_2 $ :		156	156

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	4		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6.68	13.30	—
<b>States:</b>	10,190	19,429	
<b>Premise 1 States:</b>		19,429	
<b>Premise 2 States:</b>		203	
$ A $ :		1	
$ S_1 $ :		598	
$ S_2 $ :		203	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	4		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	23.08	36.41	—
<b>States:</b>	19,056	35,481	
<b>Premise 1 States:</b>		35,481	
<b>Premise 2 States:</b>		238	
$ A $ :		1	
$ S_1 $ :		928	
$ S_2 $ :		238	



## A.5 Subject 5

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	5		
<b>Size:</b>	2		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.96	1.60	1.60
<b>States:</b>	3,557	5,472	5,472
<b>Premise 1 States:</b>		5,472	5,472
<b>Premise 2 States:</b>		103	103
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		93	93
<b> S<sub>2</sub> :</b>		103	103

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	5		
<b>Size:</b>	3		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6.04	6.08	231.46
<b>States:</b>	220,779	135,706	39,340
<b>Premise 1 States:</b>		135,706	31,898
<b>Premise 2 States:</b>		203	7,238
<b> A :</b>		1	5
<b> S<sub>1</sub> :</b>		140	239
<b> S<sub>2</sub> :</b>		203	86

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	5		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,423.87	60.04	758.98
<b>States:</b>	23,863,255	2,081,070	133,815
<b>Premise 1 States:</b>		2,081,070	106,095
<b>Premise 2 States:</b>		355	133,815
<b> A :</b>		1	5
<b> S<sub>1</sub> :</b>		175	403
<b> S<sub>2</sub> :</b>		355	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	5		
<b>Size:</b>	5		
$ P $ :	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		1,574.86	—
<b>States:</b>	OOM	45,357,966	
<b>Premise 1 States:</b>		45,357,966	
<b>Premise 2 States:</b>		597	
$ A $ :		1	
$ S_1 $ :		222	
$ S_2 $ :		597	

## A.6 Subject 6

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	6		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.95	1.30	1.30
<b>States:</b>	724	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		127	127
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		127	127

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	6		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.39	1.78	1.78
<b>States:</b>	2,294	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		238	238
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		238	238

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	6		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.37	3.05	3.05
<b>States:</b>	5,922	401	401
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		401	401
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		401	401

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	6		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6.79	6.90	—
<b>States:</b>	13,774	654	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		654	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		654	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	6		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	21.91	21.98	—
<b>States:</b>	28,568	995	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		995	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		995	

## A.7 Subject 7

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	7		
<b>Size:</b>	2		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.25	2.34	2.34
<b>States:</b>	4,326	5,299	5,299
<b>Premise 1 States:</b>		5,299	5,299
<b>Premise 2 States:</b>		74	74
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		153	153
<b> S<sub>2</sub> :</b>		74	74

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	7		
<b>Size:</b>	3		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.79	6.84	6.84
<b>States:</b>	51,056	79,672	78,791
<b>Premise 1 States:</b>		79,672	78,791
<b>Premise 2 States:</b>		121	121
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		400	400
<b> S<sub>2</sub> :</b>		121	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	7		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	62.48	72.90	74.11
<b>States:</b>	718,341	1,142,369	1,134,987
<b>Premise 1 States:</b>		1,142,369	1,134,987
<b>Premise 2 States:</b>		156	156
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		953	953
<b> S<sub>2</sub> :</b>		156	156

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	7		
<b>Size:</b>	5		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2,885.87	1,983.30	—
<b>States:</b>	12,866,528	22,391,566	
<b>Premise 1 States:</b>		22,391,566	
<b>Premise 2 States:</b>		203	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		2,124	
<b> S<sub>2</sub> :</b>		203	

## A.8 Subject 8

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	8		
<b>Size:</b>	2		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.12	2.19	2.19
<b>States:</b>	2,756	3,351	3,351
<b>Premise 1 States:</b>		3,351	3,351
<b>Premise 2 States:</b>		74	74
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		174	174
<b> S<sub>2</sub> :</b>		74	74

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	8		
<b>Size:</b>	3		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.09	5.42	5.42
<b>States:</b>	22,938	35,513	35,513
<b>Premise 1 States:</b>		35,513	35,513
<b>Premise 2 States:</b>		121	121
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		448	448
<b> S<sub>2</sub> :</b>		121	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	8		
<b>Size:</b>	4		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	24.09	29.97	29.97
<b>States:</b>	202,259	320,239	320,239
<b>Premise 1 States:</b>		320,239	320,239
<b>Premise 2 States:</b>		156	156
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		1,045	1,045
<b> S<sub>2</sub> :</b>		156	156

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	8		
<b>Size:</b>	5		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	501.00	383.37	—
<b>States:</b>	2,014,415	3,498,885	
<b>Premise 1 States:</b>		3,498,885	
<b>Premise 2 States:</b>		203	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		2,284	
<b> S<sub>2</sub> :</b>		203	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	8		
<b>Size:</b>	6		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	11,846.11	6,108.04	—
<b>States:</b>	21,681,290	37,530,117	
<b>Premise 1 States:</b>		37,530,117	
<b>Premise 2 States:</b>		238	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		4,607	
<b> S<sub>2</sub> :</b>		238	

A.9 Subject 9

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	9		
<b>Size:</b>	2		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.00	3.26	3.26
<b>States:</b>	4,910	4,016	4,016
<b>Premise 1 States:</b>		4,016	4,016
<b>Premise 2 States:</b>		525	525
<b> A :</b>		3	3
<b> S<sub>1</sub> :</b>		125	125
<b> S<sub>2</sub> :</b>		61	61

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	9		
<b>Size:</b>	3		
<b> P :</b>	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	9.74	218.09	218.09
<b>States:</b>	336,026	44,941	44,941
<b>Premise 1 States:</b>		26,862	26,862
<b>Premise 2 States:</b>		16,426	16,426
<b> A :</b>		5	5
<b> S<sub>1</sub> :</b>		237	237
<b> S<sub>2</sub> :</b>		108	108

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	9		
<b>Size:</b>	4		
<b> P :</b>	10		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3,232.49	1,433.29	1,826.78
<b>States:</b>	37,526,650	310,553	*214,247
<b>Premise 1 States:</b>		86,625	87,197
<b>Premise 2 States:</b>		310,553	214,247
<b> A :</b>		6	6
<b> S<sub>1</sub> :</b>		401	405
<b> S<sub>2</sub> :</b>		143	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	9		
<b>Size:</b>	5		
<b> P :</b>	12		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		12,881.27	—
<b>States:</b>	OOM	8,260,254	
<b>Premise 1 States:</b>		284,645	
<b>Premise 2 States:</b>		8,260,254	
<b> A :</b>		8	
<b> S<sub>1</sub> :</b>		655	
<b> S<sub>2</sub> :</b>		190	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	9		
<b>Size:</b>	6		
<b> P :</b>	14		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		51,854.39	—
<b>States:</b>	OOM	144,145,585	
<b>Premise 1 States:</b>		674,002	
<b>Premise 2 States:</b>		144,145,585	
<b> A :</b>		9	
<b> S<sub>1</sub> :</b>		997	
<b> S<sub>2</sub> :</b>		225	

## A.10 Subject 10

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	10		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.04	1.44	1.44
<b>States:</b>	1,521	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		177	177
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		51	51
<b> S<sub>2</sub> :</b>		177	177



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	10		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.38	1.99	1.99
<b>States:</b>	3,933	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		308	308
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		308	308

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	10		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.79	2.81	3.32
<b>States:</b>	8,663	489	488
<b>Premise 1 States:</b>		325	479
<b>Premise 2 States:</b>		489	488
$ A $ :		1	1
$ S_1 $ :		51	61
$ S_2 $ :		489	488

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	10		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.35	5.56	—
<b>States:</b>	18,389	762	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		762	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		762	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	10		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	13.73	13.81	—
<b>States:</b>	35,461	1,121	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		1,121	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		1,121	

## A.11 Subject 11

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	11		
<b>Size:</b>	2		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.76	3.06	3.06
<b>States:</b>	14,797	12,050	12,050
<b>Premise 1 States:</b>		12,050	12,050
<b>Premise 2 States:</b>		109	109
$ A $ :		1	1
$ S_1 $ :		211	211
$ S_2 $ :		109	109

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	11		
<b>Size:</b>	3		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	7.38	17.64	1,452.82
<b>States:</b>	151,923	132,857	46,581
<b>Premise 1 States:</b>		132,857	42,837
<b>Premise 2 States:</b>		156	5,941
$ A $ :		1	17
$ S_1 $ :		504	267
$ S_2 $ :		156	345

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	11		
<b>Size:</b>	4		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	90.41	204.04	7,389.24
<b>States:</b>	1,531,962	1,288,246	*100,949
<b>Premise 1 States:</b>		1,288,246	91,136
<b>Premise 2 States:</b>		191	40,235
<b> A :</b>		1	21
<b> S<sub>1</sub> :</b>		1,118	385
<b> S<sub>2</sub> :</b>		191	870

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	11		
<b>Size:</b>	5		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,584.48	4,027.31	—
<b>States:</b>	18,460,786	16,532,689	
<b>Premise 1 States:</b>		16,532,689	
<b>Premise 2 States:</b>		238	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		2,376	
<b> S<sub>2</sub> :</b>		238	

## A.12 Subject 12

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	12		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.09	22.09	22.09
<b>States:</b>	7,586	4,371	4,371
<b>Premise 1 States:</b>		1,002	1,002
<b>Premise 2 States:</b>		4,371	4,371
<b> A :</b>		15	15
<b> S<sub>1</sub> :</b>		55	55
<b> S<sub>2</sub> :</b>		168	168

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	12		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.17	80.92	124.44
<b>States:</b>	29,372	11,790	11,459
<b>Premise 1 States:</b>		2,774	4,965
<b>Premise 2 States:</b>		11,790	11,459
$ A $ :		20	20
$ S_1 $ :		105	126
$ S_2 $ :		267	263

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	12		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.19	217.23	405.00
<b>States:</b>	80,344	25,387	25,051
<b>Premise 1 States:</b>		6,466	25,051
<b>Premise 2 States:</b>		25,387	24,964
$ A $ :		25	23
$ S_1 $ :		186	236
$ S_2 $ :		385	376

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	12		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	10.07	490.46	—
<b>States:</b>	207,926	51,452	
<b>Premise 1 States:</b>		13,230	
<b>Premise 2 States:</b>		51,452	
$ A $ :		30	
$ S_1 $ :		307	
$ S_2 $ :		555	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	12		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	25.73	1,081.56	—
<b>States:</b>	438,252	91,091	
<b>Premise 1 States:</b>		24,506	
<b>Premise 2 States:</b>		91,091	
$ A $ :		35	
$ S_1 $ :		477	
$ S_2 $ :		762	

## A.13 Subject 13

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	13		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.08	90.43	90.43
<b>States:</b>	8,560	4,727	4,727
<b>Premise 1 States:</b>		1,411	1,411
<b>Premise 2 States:</b>		4,727	4,727
$ A $ :		29	29
$ S_1 $ :		56	56
$ S_2 $ :		168	168

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	13		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.22	261.48	383.71
<b>States:</b>	32,434	12,802	12,362
<b>Premise 1 States:</b>		3,667	6,303
<b>Premise 2 States:</b>		12,802	12,362
$ A $ :		33	33
$ S_1 $ :		106	126
$ S_2 $ :		267	263

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	13		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.93	723.20	987.26
<b>States:</b>	90,816	27,754	26,363
<b>Premise 1 States:</b>		8,903	14,035
<b>Premise 2 States:</b>		27,754	26,363
<b> A :</b>		42	42
<b> S<sub>1</sub> :</b>		187	207
<b> S<sub>2</sub> :</b>		385	381

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	13		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	10.13	1,702.69	—
<b>States:</b>	230,464	56,271	
<b>Premise 1 States:</b>		18,675	
<b>Premise 2 States:</b>		56,271	
<b> A :</b>		51	
<b> S<sub>1</sub> :</b>		308	
<b> S<sub>2</sub> :</b>		555	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	13		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	26.93	3,708.52	—
<b>States:</b>	494,250	100,001	
<b>Premise 1 States:</b>		35,143	
<b>Premise 2 States:</b>		100,001	
<b> A :</b>		60	
<b> S<sub>1</sub> :</b>		478	
<b> S<sub>2</sub> :</b>		762	

A.14 Subject 14

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	14		
<b>Size:</b>	2		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.19	1.62	1.62
<b>States:</b>	13,991	5,472	5,472
<b>Premise 1 States:</b>		5,472	5,472
<b>Premise 2 States:</b>		153	153
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		93	93
<b> S<sub>2</sub> :</b>		153	153

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	14		
<b>Size:</b>	3		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	15.35	6.20	463.62
<b>States:</b>	944,001	135,706	*89,773
<b>Premise 1 States:</b>		135,706	46,388
<b>Premise 2 States:</b>		273	7,238
<b> A :</b>		1	4
<b> S<sub>1</sub> :</b>		140	309
<b> S<sub>2</sub> :</b>		273	86

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	14		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3,830.06	57.60	2,347.62
<b>States:</b>	98,848,737	2,081,070	*191,092
<b>Premise 1 States:</b>		2,081,070	138,655
<b>Premise 2 States:</b>		443	133,815
<b> A :</b>		1	5
<b> S<sub>1</sub> :</b>		175	491
<b> S<sub>2</sub> :</b>		443	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	14		
<b>Size:</b>	5		
$ P $ :	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		1,373.83	—
<b>States:</b>	OOM	45,357,966	
<b>Premise 1 States:</b>		45,357,966	
<b>Premise 2 States:</b>		705	
$ A $ :		1	
$ S_1 $ :		222	
$ S_2 $ :		705	

## A.15 Subject 15

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	15		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.06	1.48	1.48
<b>States:</b>	1,521	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		177	177
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		177	177

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	15		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.40	1.93	1.93
<b>States:</b>	3,933	325	325
<b>Premise 1 States:</b>		325	325
<b>Premise 2 States:</b>		308	308
$ A $ :		1	1
$ S_1 $ :		51	51
$ S_2 $ :		308	308



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	15		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.78	2.84	3.07
<b>States:</b>	8,663	489	488
<b>Premise 1 States:</b>		325	479
<b>Premise 2 States:</b>		489	488
$ A $ :		1	1
$ S_1 $ :		51	61
$ S_2 $ :		489	488

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	15		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.37	5.48	—
<b>States:</b>	18,389	762	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		762	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		762	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	15		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	13.66	13.90	—
<b>States:</b>	35,461	1,121	
<b>Premise 1 States:</b>		325	
<b>Premise 2 States:</b>		1,121	
$ A $ :		1	
$ S_1 $ :		51	
$ S_2 $ :		1,121	

A.16 Subject 16

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	16		
<b>Size:</b>	2		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.91	3.39	3.39
<b>States:</b>	25,099	20,435	20,435
<b>Premise 1 States:</b>		20,435	20,435
<b>Premise 2 States:</b>		109	109
$ A $ :		1	1
$ S_1 $ :		192	192
$ S_2 $ :		109	109

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	16		
<b>Size:</b>	3		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	12.50	32.74	17,852.53
<b>States:</b>	382,207	337,455	71,780
<b>Premise 1 States:</b>		337,455	66,012
<b>Premise 2 States:</b>		156	69,445
$ A $ :		1	64
$ S_1 $ :		459	259
$ S_2 $ :		156	351

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	16		
<b>Size:</b>	4		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	311.40	750.16	197.24
<b>States:</b>	6,466,376	5,499,921	*3,165,393
<b>Premise 1 States:</b>		5,499,921	2,685
<b>Premise 2 States:</b>		191	3,165,393
$ A $ :		1	6
$ S_1 $ :		1,030	348
$ S_2 $ :		191	903

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	16		
<b>Size:</b>	5		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	11,440.27	28,516.35	—
<b>States:</b>	146,347,904	132,254,739	
<b>Premise 1 States:</b>		132,254,739	
<b>Premise 2 States:</b>		238	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		2,221	
<b> S<sub>2</sub> :</b>		238	

A.17 Subject 17

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	17		
<b>Size:</b>	2		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.31	1.67	1.67
<b>States:</b>	7,123	957	957
<b>Premise 1 States:</b>		957	957
<b>Premise 2 States:</b>		168	168
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		124	124
<b> S<sub>2</sub> :</b>		168	168

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	17		
<b>Size:</b>	3		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.37	2.76	2.76
<b>States:</b>	54,268	5,941	5,941
<b>Premise 1 States:</b>		5,941	5,941
<b>Premise 2 States:</b>		267	267
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		348	348
<b> S<sub>2</sub> :</b>		267	267

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	17		
<b>Size:</b>	4		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	20.88	6.41	6.41
<b>States:</b>	431,337	40,235	40,235
<b>Premise 1 States:</b>		40,235	40,235
<b>Premise 2 States:</b>		385	385
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		874	874
<b> S<sub>2</sub> :</b>		385	385

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	17		
<b>Size:</b>	5		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	254.35	27.09	—
<b>States:</b>	4,049,151	304,439	
<b>Premise 1 States:</b>		304,439	
<b>Premise 2 States:</b>		555	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,992	
<b> S<sub>2</sub> :</b>		555	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	17		
<b>Size:</b>	6		
<b> P :</b>	2		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4,157.57	200.24	—
<b>States:</b>	41,046,169	2,572,615	
<b>Premise 1 States:</b>		2,572,615	
<b>Premise 2 States:</b>		762	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		4,155	
<b> S<sub>2</sub> :</b>		762	

A.18 Subject 18

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	18		
<b>Size:</b>	2		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.49	1.65	1.65
<b>States:</b>	18,981	6,731	6,731
<b>Premise 1 States:</b>		6,731	6,731
<b>Premise 2 States:</b>		153	153
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		93	93
<b> S<sub>2</sub> :</b>		153	153

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	18		
<b>Size:</b>	3		
<b> P :</b>	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	26.26	7.60	4,463.78
<b>States:</b>	1,399,453	201,162	*111,099
<b>Premise 1 States:</b>		201,162	111,099
<b>Premise 2 States:</b>		273	101,299
<b> A :</b>		1	33
<b> S<sub>1</sub> :</b>		140	279
<b> S<sub>2</sub> :</b>		273	121

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	18		
<b>Size:</b>	4		
<b> P :</b>	10		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	7,492.12	97.56	4,972.47
<b>States:</b>	152,928,193	3,646,122	*341,412
<b>Premise 1 States:</b>		3,646,122	111,705
<b>Premise 2 States:</b>		443	310,553
<b> A :</b>		1	6
<b> S<sub>1</sub> :</b>		175	489
<b> S<sub>2</sub> :</b>		443	143

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	18		
<b>Size:</b>	5		
<b> P :</b>	12		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		3,356.53	—
<b>States:</b>	OOM	95,201,173	
<b>Premise 1 States:</b>		95,201,173	
<b>Premise 2 States:</b>		705	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		222	
<b> S<sub>2</sub> :</b>		705	

## A.19 Subject 19

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	19		
<b>Size:</b>	2		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	7.05	7.05
<b>States:</b>	13,674	4,306	4,306
<b>Premise 1 States:</b>		4,306	4,306
<b>Premise 2 States:</b>		2,184	2,184
<b> A :</b>		8	8
<b> S<sub>1</sub> :</b>		94	94
<b> S<sub>2</sub> :</b>		57	57

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	19		
<b>Size:</b>	3		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6.08	14.72	14.72
<b>States:</b>	346,330	44,602	44,602
<b>Premise 1 States:</b>		6,514	6,514
<b>Premise 2 States:</b>		44,602	44,602
<b> A :</b>		8	8
<b> S<sub>1</sub> :</b>		126	126
<b> S<sub>2</sub> :</b>		91	91

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	19		
<b>Size:</b>	4		
$ P $ :	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	129.20	38.31	578.29
<b>States:</b>	6,814,798	740,840	*114,824
<b>Premise 1 States:</b>		8,722	80,704
<b>Premise 2 States:</b>		740,840	114,824
$ A $ :		8	17
$ S_1 $ :		158	168
$ S_2 $ :		125	98

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	19		
<b>Size:</b>	5		
$ P $ :	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3,581.18	310.76	—
<b>States:</b>	117,309,034	11,244,914	
<b>Premise 1 States:</b>		10,930	
<b>Premise 2 States:</b>		11,244,914	
$ A $ :		8	
$ S_1 $ :		190	
$ S_2 $ :		159	

A.20 Subject 20

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.83	1.31	1.31
<b>States:</b>	92	81	81
<b>Premise 1 States:</b>		81	81
<b>Premise 2 States:</b>		79	79
$ A $ :		1	1
$ S_1 $ :		81	81
$ S_2 $ :		79	79

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.87	1.53	1.49
<b>States:</b>	130	115	110
<b>Premise 1 States:</b>		115	110
<b>Premise 2 States:</b>		111	110
$ A $ :		1	1
$ S_1 $ :		115	110
$ S_2 $ :		111	110

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.91	1.77	1.75
<b>States:</b>	168	149	146
<b>Premise 1 States:</b>		149	137
<b>Premise 2 States:</b>		143	146
$ A $ :		1	1
$ S_1 $ :		149	137
$ S_2 $ :		143	146

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.06	2.67	1.96
<b>States:</b>	206	183	180
<b>Premise 1 States:</b>		183	163
<b>Premise 2 States:</b>		175	180
$ A $ :		1	1
$ S_1 $ :		183	163
$ S_2 $ :		175	180



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.42	3.18	—
<b>States:</b>	244	217	
<b>Premise 1 States:</b>		217	
<b>Premise 2 States:</b>		207	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		217	
<b> S<sub>2</sub> :</b>		207	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.16	3.24	—
<b>States:</b>	282	251	
<b>Premise 1 States:</b>		251	
<b>Premise 2 States:</b>		239	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		251	
<b> S<sub>2</sub> :</b>		239	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.30	3.93	—
<b>States:</b>	320	285	
<b>Premise 1 States:</b>		285	
<b>Premise 2 States:</b>		271	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		285	
<b> S<sub>2</sub> :</b>		271	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	9		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.38	5.48	—
<b>States:</b>	358	319	
<b>Premise 1 States:</b>		319	
<b>Premise 2 States:</b>		303	
$ A $ :		1	
$ S_1 $ :		319	
$ S_2 $ :		303	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	10		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.49	6.57	—
<b>States:</b>	396	353	
<b>Premise 1 States:</b>		353	
<b>Premise 2 States:</b>		335	
$ A $ :		1	
$ S_1 $ :		353	
$ S_2 $ :		335	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	20		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.97	34.63	—
<b>States:</b>	776	693	
<b>Premise 1 States:</b>		693	
<b>Premise 2 States:</b>		655	
$ A $ :		1	
$ S_1 $ :		693	
$ S_2 $ :		655	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	30		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.54	100.00	—
<b>States:</b>	1,156	1,033	
<b>Premise 1 States:</b>		1,033	
<b>Premise 2 States:</b>		975	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,033	
<b> S<sub>2</sub> :</b>		975	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	40		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	9.73	230.28	—
<b>States:</b>	1,536	1,373	
<b>Premise 1 States:</b>		1,373	
<b>Premise 2 States:</b>		1,295	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,373	
<b> S<sub>2</sub> :</b>		1,295	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	50		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	16.57	399.65	—
<b>States:</b>	1,916	1,713	
<b>Premise 1 States:</b>		1,713	
<b>Premise 2 States:</b>		1,615	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,713	
<b> S<sub>2</sub> :</b>		1,615	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	60		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	24.73	729.82	—
<b>States:</b>	2,296	2,053	
<b>Premise 1 States:</b>		2,053	
<b>Premise 2 States:</b>		1,935	
$ A $ :		1	
$ S_1 $ :		2,053	
$ S_2 $ :		1,935	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	70		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	35.87	1,133.15	—
<b>States:</b>	2,676	2,393	
<b>Premise 1 States:</b>		2,393	
<b>Premise 2 States:</b>		2,255	
$ A $ :		1	
$ S_1 $ :		2,393	
$ S_2 $ :		2,255	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	80		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	51.37	1,603.64	—
<b>States:</b>	3,056	2,733	
<b>Premise 1 States:</b>		2,733	
<b>Premise 2 States:</b>		2,575	
$ A $ :		1	
$ S_1 $ :		2,733	
$ S_2 $ :		2,575	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	90		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	72.20	2,298.14	—
<b>States:</b>	3,436	3,073	
<b>Premise 1 States:</b>		3,073	
<b>Premise 2 States:</b>		2,895	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		3,073	
<b> S<sub>2</sub> :</b>		2,895	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	100		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	87.58	3,154.62	—
<b>States:</b>	3,816	3,413	
<b>Premise 1 States:</b>		3,413	
<b>Premise 2 States:</b>		3,215	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		3,413	
<b> S<sub>2</sub> :</b>		3,215	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	110		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	112.89	4,324.14	—
<b>States:</b>	4,196	3,753	
<b>Premise 1 States:</b>		3,753	
<b>Premise 2 States:</b>		3,535	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		3,753	
<b> S<sub>2</sub> :</b>		3,535	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	120		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	166.29	5,548.39	—
<b>States:</b>	4,576	4,093	
<b>Premise 1 States:</b>		4,093	
<b>Premise 2 States:</b>		3,855	
$ A $ :		1	
$ S_1 $ :		4,093	
$ S_2 $ :		3,855	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	130		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	178.96	6,924.19	—
<b>States:</b>	4,956	4,433	
<b>Premise 1 States:</b>		4,433	
<b>Premise 2 States:</b>		4,175	
$ A $ :		1	
$ S_1 $ :		4,433	
$ S_2 $ :		4,175	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	140		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	218.16	8,732.34	—
<b>States:</b>	5,336	4,773	
<b>Premise 1 States:</b>		4,773	
<b>Premise 2 States:</b>		4,495	
$ A $ :		1	
$ S_1 $ :		4,773	
$ S_2 $ :		4,495	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	150		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	265.35	10,690.95	—
<b>States:</b>	5,716	5,113	
<b>Premise 1 States:</b>		5,113	
<b>Premise 2 States:</b>		4,815	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		5,113	
<b> S<sub>2</sub> :</b>		4,815	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	160		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	318.24	12,622.43	—
<b>States:</b>	6,096	5,453	
<b>Premise 1 States:</b>		5,453	
<b>Premise 2 States:</b>		5,135	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		5,453	
<b> S<sub>2</sub> :</b>		5,135	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	170		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	378.71	15,294.33	—
<b>States:</b>	6,476	5,793	
<b>Premise 1 States:</b>		5,793	
<b>Premise 2 States:</b>		5,455	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		5,793	
<b> S<sub>2</sub> :</b>		5,455	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	180		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	434.76	18,818.14	—
<b>States:</b>	6,856	6,133	
<b>Premise 1 States:</b>		6,133	
<b>Premise 2 States:</b>		5,775	
$ A $ :		1	
$ S_1 $ :		6,133	
$ S_2 $ :		5,775	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	190		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	512.63	22,606.63	—
<b>States:</b>	7,236	6,473	
<b>Premise 1 States:</b>		6,473	
<b>Premise 2 States:</b>		6,095	
$ A $ :		1	
$ S_1 $ :		6,473	
$ S_2 $ :		6,095	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	20		
<b>Size:</b>	200		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	592.50	28,194.24	—
<b>States:</b>	7,616	6,813	
<b>Premise 1 States:</b>		6,813	
<b>Premise 2 States:</b>		6,415	
$ A $ :		1	
$ S_1 $ :		6,813	
$ S_2 $ :		6,415	



## A.21 Subject 21

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.82	1.11	1.11
<b>States:</b>	970	105	105
<b>Premise 1 States:</b>		105	105
<b>Premise 2 States:</b>		100	100
$ A $ :		1	1
$ S_1 $ :		29	29
$ S_2 $ :		100	100

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.87	1.21	1.21
<b>States:</b>	1,991	175	175
<b>Premise 1 States:</b>		175	175
<b>Premise 2 States:</b>		143	143
$ A $ :		1	1
$ S_1 $ :		37	37
$ S_2 $ :		143	143

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.07	1.45	1.45
<b>States:</b>	3,376	263	263
<b>Premise 1 States:</b>		263	263
<b>Premise 2 States:</b>		186	186
$ A $ :		1	1
$ S_1 $ :		45	45
$ S_2 $ :		186	186

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.15	1.57	—
<b>States:</b>	5,125	369	
<b>Premise 1 States:</b>		369	
<b>Premise 2 States:</b>		229	
$ A $ :		1	
$ S_1 $ :		53	
$ S_2 $ :		229	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.66	1.69	—
<b>States:</b>	7,238	493	
<b>Premise 1 States:</b>		493	
<b>Premise 2 States:</b>		272	
$ A $ :		1	
$ S_1 $ :		61	
$ S_2 $ :		272	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	7		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.88	1.86	—
<b>States:</b>	9,715	635	
<b>Premise 1 States:</b>		635	
<b>Premise 2 States:</b>		315	
$ A $ :		1	
$ S_1 $ :		69	
$ S_2 $ :		315	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	8		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.12	2.07	—
<b>States:</b>	12,556	795	
<b>Premise 1 States:</b>		795	
<b>Premise 2 States:</b>		358	
$ A $ :		1	
$ S_1 $ :		77	
$ S_2 $ :		358	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	9		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.39	2.26	—
<b>States:</b>	15,761	973	
<b>Premise 1 States:</b>		973	
<b>Premise 2 States:</b>		401	
$ A $ :		1	
$ S_1 $ :		85	
$ S_2 $ :		401	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	10		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.69	2.44	—
<b>States:</b>	19,330	1,169	
<b>Premise 1 States:</b>		1,169	
<b>Premise 2 States:</b>		444	
$ A $ :		1	
$ S_1 $ :		93	
$ S_2 $ :		444	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	20		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	9.73	6.52	—
<b>States:</b>	75,040	4,119	
<b>Premise 1 States:</b>		4,119	
<b>Premise 2 States:</b>		874	
$ A $ :		1	
$ S_1 $ :		173	
$ S_2 $ :		874	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	30		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	25.59	14.58	—
<b>States:</b>	167,150	8,869	
<b>Premise 1 States:</b>		8,869	
<b>Premise 2 States:</b>		1,304	
$ A $ :		1	
$ S_1 $ :		253	
$ S_2 $ :		1,304	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	40		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	55.33	27.74	—
<b>States:</b>	295,660	15,419	
<b>Premise 1 States:</b>		15,419	
<b>Premise 2 States:</b>		1,734	
$ A $ :		1	
$ S_1 $ :		333	
$ S_2 $ :		1,734	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	50		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	103.95	49.96	—
<b>States:</b>	460,570	23,769	
<b>Premise 1 States:</b>		23,769	
<b>Premise 2 States:</b>		2,164	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		413	
<b> S<sub>2</sub> :</b>		2,164	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	60		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	178.81	75.82	—
<b>States:</b>	661,880	33,919	
<b>Premise 1 States:</b>		33,919	
<b>Premise 2 States:</b>		2,594	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		493	
<b> S<sub>2</sub> :</b>		2,594	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	70		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	295.96	118.80	—
<b>States:</b>	899,590	45,869	
<b>Premise 1 States:</b>		45,869	
<b>Premise 2 States:</b>		3,024	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		573	
<b> S<sub>2</sub> :</b>		3,024	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	80		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	466.45	165.87	—
<b>States:</b>	1,173,700	59,619	
<b>Premise 1 States:</b>		59,619	
<b>Premise 2 States:</b>		3,454	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		653	
<b> S<sub>2</sub> :</b>		3,454	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	90		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	692.35	228.75	—
<b>States:</b>	1,484,210	75,169	
<b>Premise 1 States:</b>		75,169	
<b>Premise 2 States:</b>		3,884	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		733	
<b> S<sub>2</sub> :</b>		3,884	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	100		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,013.25	312.71	—
<b>States:</b>	1,831,120	92,519	
<b>Premise 1 States:</b>		92,519	
<b>Premise 2 States:</b>		4,314	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		813	
<b> S<sub>2</sub> :</b>		4,314	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	110		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,445.31	398.00	—
<b>States:</b>	2,214,430	111,669	
<b>Premise 1 States:</b>		111,669	
<b>Premise 2 States:</b>		4,744	
$ A $ :		1	
$ S_1 $ :		893	
$ S_2 $ :		4,744	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	120		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,949.96	514.45	—
<b>States:</b>	2,634,140	132,619	
<b>Premise 1 States:</b>		132,619	
<b>Premise 2 States:</b>		5,174	
$ A $ :		1	
$ S_1 $ :		973	
$ S_2 $ :		5,174	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	130		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2,560.25	637.53	—
<b>States:</b>	3,090,250	155,369	
<b>Premise 1 States:</b>		155,369	
<b>Premise 2 States:</b>		5,604	
$ A $ :		1	
$ S_1 $ :		1,053	
$ S_2 $ :		5,604	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	140		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3,433.82	794.48	—
<b>States:</b>	3,582,760	179,919	
<b>Premise 1 States:</b>		179,919	
<b>Premise 2 States:</b>		6,034	
$ A $ :		1	
$ S_1 $ :		1,133	
$ S_2 $ :		6,034	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	150		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4,053.01	947.55	—
<b>States:</b>	4,111,670	206,269	
<b>Premise 1 States:</b>		206,269	
<b>Premise 2 States:</b>		6,464	
$ A $ :		1	
$ S_1 $ :		1,213	
$ S_2 $ :		6,464	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	160		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5,165.89	1,161.40	—
<b>States:</b>	4,676,980	234,419	
<b>Premise 1 States:</b>		234,419	
<b>Premise 2 States:</b>		6,894	
$ A $ :		1	
$ S_1 $ :		1,293	
$ S_2 $ :		6,894	



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	170		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	6,347.57	1,371.60	—
<b>States:</b>	5,278,690	264,369	
<b>Premise 1 States:</b>		264,369	
<b>Premise 2 States:</b>		7,324	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,373	
<b> S<sub>2</sub> :</b>		7,324	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	180		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	7,654.96	1,644.28	—
<b>States:</b>	5,916,800	296,119	
<b>Premise 1 States:</b>		296,119	
<b>Premise 2 States:</b>		7,754	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,453	
<b> S<sub>2</sub> :</b>		7,754	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	190		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	9,145.25	1,921.71	—
<b>States:</b>	6,591,310	329,669	
<b>Premise 1 States:</b>		329,669	
<b>Premise 2 States:</b>		8,184	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,533	
<b> S<sub>2</sub> :</b>		8,184	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	21		
<b>Size:</b>	200		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	10,788.36	2,189.26	—
<b>States:</b>	7,302,220	365,019	
<b>Premise 1 States:</b>		365,019	
<b>Premise 2 States:</b>		8,614	
$ A $ :		1	
$ S_1 $ :		1,613	
$ S_2 $ :		8,614	

## A.22 Subject 22

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.98	11.74	11.74
<b>States:</b>	7,075	2,847	2,847
<b>Premise 1 States:</b>		2,573	2,573
<b>Premise 2 States:</b>		2,425	2,425
$ A $ :		11	11
$ S_1 $ :		91	91
$ S_2 $ :		56	56

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.07	26.73	26.73
<b>States:</b>	41,163	6,674	6,674
<b>Premise 1 States:</b>		5,698	5,698
<b>Premise 2 States:</b>		4,153	4,153
$ A $ :		11	11
$ S_1 $ :		134	134
$ S_2 $ :		64	64

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.74	55.22	55.22
<b>States:</b>	108,448	11,649	11,649
<b>Premise 1 States:</b>		9,769	9,769
<b>Premise 2 States:</b>		6,247	6,247
$ A $ :		11	11
$ S_1 $ :		177	177
$ S_2 $ :		72	72

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	10.36	112.86	—
<b>States:</b>	224,575	17,964	
<b>Premise 1 States:</b>		14,920	
<b>Premise 2 States:</b>		8,707	
$ A $ :		11	
$ S_1 $ :		220	
$ S_2 $ :		80	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	23.30	204.12	—
<b>States:</b>	402,720	25,631	
<b>Premise 1 States:</b>		21,151	
<b>Premise 2 States:</b>		11,533	
$ A $ :		11	
$ S_1 $ :		263	
$ S_2 $ :		88	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	7		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	42.17	345.53	—
<b>States:</b>	656,059	34,711	
<b>Premise 1 States:</b>		28,462	
<b>Premise 2 States:</b>		14,725	
$ A $ :		11	
$ S_1 $ :		306	
$ S_2 $ :		96	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	8		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	71.64	541.39	—
<b>States:</b>	997,768	45,208	
<b>Premise 1 States:</b>		36,853	
<b>Premise 2 States:</b>		18,283	
$ A $ :		11	
$ S_1 $ :		349	
$ S_2 $ :		104	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	9		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	132.60	788.78	—
<b>States:</b>	1,441,023	57,089	
<b>Premise 1 States:</b>		46,324	
<b>Premise 2 States:</b>		22,207	
$ A $ :		11	
$ S_1 $ :		392	
$ S_2 $ :		112	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	10		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	182.07	1,223.93	—
<b>States:</b>	1,999,000	70,354	
<b>Premise 1 States:</b>		56,875	
<b>Premise 2 States:</b>		26,497	
$ A $ :		11	
$ S_1 $ :		435	
$ S_2 $ :		120	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	20		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3,240.06	15,442.27	—
<b>States:</b>	16,787,200	279,124	
<b>Premise 1 States:</b>		221,785	
<b>Premise 2 States:</b>		89,527	
$ A $ :		11	
$ S_1 $ :		865	
$ S_2 $ :		200	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	30		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	17,204.01	75,064.47	—
<b>States:</b>	57,541,200	626,294	
<b>Premise 1 States:</b>		494,695	
<b>Premise 2 States:</b>		189,157	
$ A $ :		11	
$ S_1 $ :		1,295	
$ S_2 $ :		280	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	40		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	59,555.44	224,231.86	—
<b>States:</b>	137,437,000	1,111,864	
<b>Premise 1 States:</b>		875,605	
<b>Premise 2 States:</b>		325,387	
$ A $ :		11	
$ S_1 $ :		1,725	
$ S_2 $ :		360	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	47		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	450,262.72	444,746.59	—
<b>States:</b>	223,709,179	1,534,111	
<b>Premise 1 States:</b>		1,206,502	
<b>Premise 2 States:</b>		442,525	
$ A $ :		11	
$ S_1 $ :		2,026	
$ S_2 $ :		416	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	48		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		480,113.89	—
<b>States:</b>	OOM	1,599,968	
<b>Premise 1 States:</b>		1,258,093	
<b>Premise 2 States:</b>		460,723	
$ A $ :		11	
$ S_1 $ :		2,069	
$ S_2 $ :		424	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	22		
<b>Size:</b>	50		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		539,672.30	—
<b>States:</b>	OOM	1,735,834	
<b>Premise 1 States:</b>		1,364,515	
<b>Premise 2 States:</b>		498,217	
$ A $ :		11	
$ S_1 $ :		2,155	
$ S_2 $ :		440	

A.23 Subject 23

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	23		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.81	28.55	28.55
<b>States:</b>	201	3,621	3,621
<b>Premise 1 States:</b>		3,621	3,621
<b>Premise 2 States:</b>		24	24
$ A $ :		20	20
$ S_1 $ :		33	33
$ S_2 $ :		17	17

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	23		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.97		—
<b>States:</b>	25,557	OOM	> 100,000

## A.24 Subject 24

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	24		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.80	2.10	2.10
<b>States:</b>	237	174	174
<b>Premise 1 States:</b>		149	149
<b>Premise 2 States:</b>		131	131
$ A $ :		8	8
$ S_1 $ :		23	23
$ S_2 $ :		28	28

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	24		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.24	81.96	17.97
<b>States:</b>	5,271	6,462	2,699
<b>Premise 1 States:</b>		5,953	2,699
<b>Premise 2 States:</b>		1,345	1,402
$ A $ :		44	21
$ S_1 $ :		44	43
$ S_2 $ :		43	43

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	24		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.67	13,880.79	101.26
<b>States:</b>	56,022	646,453	14,897
<b>Premise 1 States:</b>		646,453	8,349
<b>Premise 2 States:</b>		2,940	14,003
$ A $ :		252	43
$ S_1 $ :		69	49
$ S_2 $ :		53	67



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	24		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	41.66		842.24
<b>States:</b>	618,069	OOM	143,978
<b>Premise 1 States:</b>			143,978
<b>Premise 2 States:</b>			29,600
$ A $ :			67
$ S_1 $ :			79
$ S_2 $ :			75

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	24		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1,322.30		—
<b>States:</b>	7,209,228	OOM	

## A.25 Subject 25

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	25		
<b>Size:</b>	2		
$ P $ :	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.85	268.79	268.79
<b>States:</b>	515	4,424	4,424
<b>Premise 1 States:</b>		4,300	4,300
<b>Premise 2 States:</b>		4,424	4,424
$ A $ :		64	64
$ S_1 $ :		44	44
$ S_2 $ :		52	52

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	25		
<b>Size:</b>	3		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.74		3,927.27
<b>States:</b>	12,395	OOM	*1,007,640
<b>Premise 1 States:</b>			13,024
<b>Premise 2 States:</b>			1,007,640
$ A $ :			153
$ S_1 $ :			62
$ S_2 $ :			122

## A.26 Subject 26

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	26		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.84	347.39	347.39
<b>States:</b>	515	4,292	4,292
<b>Premise 1 States:</b>		4,017	4,017
<b>Premise 2 States:</b>		4,292	4,292
$ A $ :		67	67
$ S_1 $ :		44	44
$ S_2 $ :		52	52

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	26		
<b>Size:</b>	3		
$ P $ :	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.70		1,203.44
<b>States:</b>	12,395	OOM	*1,007,640
<b>Premise 1 States:</b>			9,414
<b>Premise 2 States:</b>			1,007,640
$ A $ :			97
$ S_1 $ :			62
$ S_2 $ :			122

## A.27 Subject 27

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	27		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.87	193.57	193.57
<b>States:</b>	555	4,861	4,861
<b>Premise 1 States:</b>		4,769	4,769
<b>Premise 2 States:</b>		4,861	4,861
<b> A :</b>		53	53
<b> S<sub>1</sub> :</b>		46	46
<b> S<sub>2</sub> :</b>		53	53

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	27		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.83		4,435.84
<b>States:</b>	13,087	OOM	334,463
<b>Premise 1 States:</b>			20,635
<b>Premise 2 States:</b>			334,463
<b> A :</b>			136
<b> S<sub>1</sub> :</b>			76
<b> S<sub>2</sub> :</b>			104

A.28 Subject 28

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	28		
<b>Size:</b>	2		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.86	318.07	318.07
<b>States:</b>	555	5,983	5,983
<b>Premise 1 States:</b>		3,307	3,307
<b>Premise 2 States:</b>		5,983	5,983
<b> A :</b>		61	61
<b> S<sub>1</sub> :</b>		43	43
<b> S<sub>2</sub> :</b>		51	51

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	28		
<b>Size:</b>	3		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.74		56.86
<b>States:</b>	12,639	OOM	*1,039,727
<b>Premise 1 States:</b>			826
<b>Premise 2 States:</b>			1,039,727
<b> A :</b>			24
<b> S<sub>1</sub> :</b>			40
<b> S<sub>2</sub> :</b>			121

## A.29 Subject 29

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	29		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.78	47.33	47.33
<b>States:</b>	511	7,593	7,593
<b>Premise 1 States:</b>		7,593	7,593
<b>Premise 2 States:</b>		1,711	1,711
$ A $ :		21	21
$ S_1 $ :		56	56
$ S_2 $ :		43	43

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	29		
<b>Size:</b>	3		
$ P $ :	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.61		1,726.48
<b>States:</b>	13,256	OOM	*2,178,726
<b>Premise 1 States:</b>			6,121
<b>Premise 2 States:</b>			812,111
$ A $ :			95
$ S_1 $ :			65
$ S_2 $ :			122

## A.30 Subject 30

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	30		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.82	210.18	210.18
<b>States:</b>	563	4,560	4,560
<b>Premise 1 States:</b>		4,560	4,560
<b>Premise 2 States:</b>		2,847	2,847
<b> A :</b>		61	61
<b> S<sub>1</sub> :</b>		42	42
<b> S<sub>2</sub> :</b>		51	51

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	30		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.79		1,150.09
<b>States:</b>	13,865	OOM	*288,447
<b>Premise 1 States:</b>			15,012
<b>Premise 2 States:</b>			288,447
<b> A :</b>			75
<b> S<sub>1</sub> :</b>			74
<b> S<sub>2</sub> :</b>			102

## A.31 Subject 31

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	31		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.81	485.14	485.14
<b>States:</b>	479	4,124	4,124
<b>Premise 1 States:</b>		3,919	3,919
<b>Premise 2 States:</b>		3,860	3,860
$ A $ :		77	77
$ S_1 $ :		43	43
$ S_2 $ :		52	52

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	31		
<b>Size:</b>	3		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.52		415.80
<b>States:</b>	11,747	OOM	*812,111
<b>Premise 1 States:</b>			3,573
<b>Premise 2 States:</b>			812,111
$ A $ :			57
$ S_1 $ :			59
$ S_2 $ :			122

## A.32 Subject 32

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.78	1.01	1.01
<b>States:</b>	127	173	173
<b>Premise 1 States:</b>		173	173
<b>Premise 2 States:</b>		41	41
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		42	42
<b> S<sub>2</sub> :</b>		41	41

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.89	1.12	1.12
<b>States:</b>	425	281	281
<b>Premise 1 States:</b>		281	281
<b>Premise 2 States:</b>		88	88
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		64	64
<b> S<sub>2</sub> :</b>		88	88

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.97	1.35	1.35
<b>States:</b>	937	419	419
<b>Premise 1 States:</b>		419	419
<b>Premise 2 States:</b>		147	147
<b> A :</b>		1	1
<b> S<sub>1</sub> :</b>		94	94
<b> S<sub>2</sub> :</b>		147	147



<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.36	1.83	—
<b>States:</b>	1,757	587	
<b>Premise 1 States:</b>		587	
<b>Premise 2 States:</b>		222	
$ A $ :		1	
$ S_1 $ :		132	
$ S_2 $ :		222	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	6		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.02	2.20	—
<b>States:</b>	2,957	785	
<b>Premise 1 States:</b>		785	
<b>Premise 2 States:</b>		313	
$ A $ :		1	
$ S_1 $ :		178	
$ S_2 $ :		313	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	7		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.46	3.11	—
<b>States:</b>	4,609	1,013	
<b>Premise 1 States:</b>		1,013	
<b>Premise 2 States:</b>		420	
$ A $ :		1	
$ S_1 $ :		232	
$ S_2 $ :		420	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	8		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.03	4.37	—
<b>States:</b>	6,785	1,271	
<b>Premise 1 States:</b>		1,271	
<b>Premise 2 States:</b>		543	
$ A $ :		1	
$ S_1 $ :		294	
$ S_2 $ :		543	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	9		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.83	7.00	—
<b>States:</b>	9,557	1,559	
<b>Premise 1 States:</b>		1,559	
<b>Premise 2 States:</b>		682	
$ A $ :		1	
$ S_1 $ :		364	
$ S_2 $ :		682	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	10		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	9.99	10.47	—
<b>States:</b>	12,997	1,877	
<b>Premise 1 States:</b>		1,877	
<b>Premise 2 States:</b>		837	
$ A $ :		1	
$ S_1 $ :		442	
$ S_2 $ :		837	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	20		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	321.78	201.86	—
<b>States:</b>	99,977	6,707	
<b>Premise 1 States:</b>		6,707	
<b>Premise 2 States:</b>		3,267	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		1,662	
<b> S<sub>2</sub> :</b>		3,267	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	30		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2,750.24	1,420.56	—
<b>States:</b>	332,957	14,537	
<b>Premise 1 States:</b>		14,537	
<b>Premise 2 States:</b>		7,297	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		3,682	
<b> S<sub>2</sub> :</b>		7,297	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	32		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	27,833.92	1,942.04	—
<b>States:</b>	403,410	16,463	
<b>Premise 1 States:</b>		16,463	
<b>Premise 2 States:</b>		8,295	
<b> A :</b>		1	
<b> S<sub>1</sub> :</b>		4,182	
<b> S<sub>2</sub> :</b>		8,295	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	33		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		2,380.88	—
<b>States:</b>	OOM	17,471	
<b>Premise 1 States:</b>		17,471	
<b>Premise 2 States:</b>		8,818	
$ A $ :		1	
$ S_1 $ :		4,444	
$ S_2 $ :		8,818	

<b>Verifier:</b>	FLAVERS		
<b>Subject:</b>	32		
<b>Size:</b>	35		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>		3,122.41	—
<b>States:</b>	OOM	19,577	
<b>Premise 1 States:</b>		19,577	
<b>Premise 2 States:</b>		9,912	
$ A $ :		1	
$ S_1 $ :		4,992	
$ S_2 $ :		9,912	

## B. LTSA DATA

## B.1 Subject 1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	1		
<b>Size:</b>	2		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.18	2.37	2.37
<b>States:</b>	137	54	54
<b>Premise 1 States:</b>		54	54
<b>Premise 2 States:</b>		38	38
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	1		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.55	3.14	3.14
<b>States:</b>	638	422	422
<b>Premise 1 States:</b>		95	95
<b>Premise 2 States:</b>		422	422
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	1		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.85	5.12	5.12
<b>States:</b>	2,535	2,021	2,021
<b>Premise 1 States:</b>		154	154
<b>Premise 2 States:</b>		2,021	2,021
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	1		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.42	31.47	—
<b>States:</b>	40,127	42,071	
<b>Premise 1 States:</b>		321	
<b>Premise 2 States:</b>		42,071	
<b> A :</b>		1	

## B.2 Subject 2

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	2		
<b>Size:</b>	2		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.23	2.35	2.35
<b>States:</b>	137	54	54
<b>Premise 1 States:</b>		39	39
<b>Premise 2 States:</b>		54	54
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	2		
<b>Size:</b>	3		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.99	3.17	3.17
<b>States:</b>	638	423	423
<b>Premise 1 States:</b>		423	423
<b>Premise 2 States:</b>		95	95
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	2		
<b>Size:</b>	4		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.02	5.05	5.05
<b>States:</b>	2,535	2,022	2,022
<b>Premise 1 States:</b>		2,022	2,022
<b>Premise 2 States:</b>		154	154
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	2		
<b>Size:</b>	5		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.59	32.82	—
<b>States:</b>	40,127	42,072	
<b>Premise 1 States:</b>		42,072	
<b>Premise 2 States:</b>		321	
<b> A :</b>		1	

## B.3 Subject 3

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	3		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.29	2.36	2.36
<b>States:</b>	202	64	64
<b>Premise 1 States:</b>		64	64
<b>Premise 2 States:</b>		54	54
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	3		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.96	3.14	3.14
<b>States:</b>	908	679	679
<b>Premise 1 States:</b>		679	679
<b>Premise 2 States:</b>		95	95
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	3		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.85	5.11	5.11
<b>States:</b>	3,448	3,062	3,062
<b>Premise 1 States:</b>		3,062	3,062
<b>Premise 2 States:</b>		154	154
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	3		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.41	33.57	—
<b>States:</b>	54,667	63,262	
<b>Premise 1 States:</b>		63,262	
<b>Premise 2 States:</b>		321	
<b> A :</b>		1	

## B.4 Subject 4

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	4		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.27	2.42	2.42
<b>States:</b>	195	59	59
<b>Premise 1 States:</b>		59	59
<b>Premise 2 States:</b>		54	54
<b> A :</b>		1	1



<b>Verifier:</b>	LTSA		
<b>Subject:</b>	4		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.95	3.14	3.14
<b>States:</b>	820	583	583
<b>Premise 1 States:</b>		583	583
<b>Premise 2 States:</b>		95	95
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	4		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.77	4.99	4.99
<b>States:</b>	3,117	2,672	2,672
<b>Premise 1 States:</b>		2,672	2,672
<b>Premise 2 States:</b>		154	154
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	4		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.62	33.27	—
<b>States:</b>	47,523	52,504	
<b>Premise 1 States:</b>		52,504	
<b>Premise 2 States:</b>		321	
<b> A :</b>		1	

## B.5 Subject 5

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	5		
<b>Size:</b>	2		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.30	2.42	2.42
<b>States:</b>	137	54	54
<b>Premise 1 States:</b>		54	54
<b>Premise 2 States:</b>		38	38
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	5		
<b>Size:</b>	3		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.07	3.20	3.20
<b>States:</b>	638	422	422
<b>Premise 1 States:</b>		95	95
<b>Premise 2 States:</b>		422	422
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	5		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.86	4.94	4.94
<b>States:</b>	2,535	2,021	2,021
<b>Premise 1 States:</b>		154	154
<b>Premise 2 States:</b>		2,021	2,021
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	5		
<b>Size:</b>	5		
<b> P :</b>	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.14	31.52	—
<b>States:</b>	40,127	42,071	
<b>Premise 1 States:</b>		321	
<b>Premise 2 States:</b>		42,071	
<b> A :</b>		1	

B.6 Subject 6

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	6		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.24	2.29	2.29
<b>States:</b>	137	54	54
<b>Premise 1 States:</b>		39	39
<b>Premise 2 States:</b>		54	54
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	6		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.96	3.09	2.73
<b>States:</b>	638	423	422
<b>Premise 1 States:</b>		423	95
<b>Premise 2 States:</b>		95	422
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	6		
<b>Size:</b>	4		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	5.03	5.30	4.57
<b>States:</b>	2,535	2,022	2,021
<b>Premise 1 States:</b>		2,022	154
<b>Premise 2 States:</b>		154	2,021
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	6		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.53	32.74	—
<b>States:</b>	40,127	42,072	
<b>Premise 1 States:</b>		42,072	
<b>Premise 2 States:</b>		321	
$ A $ :		1	

## B.7 Subject 7

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	7		
<b>Size:</b>	2		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.33	2.42	2.42
<b>States:</b>	150	62	62
<b>Premise 1 States:</b>		62	62
<b>Premise 2 States:</b>		54	54
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	7		
<b>Size:</b>	3		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.08	3.02	3.02
<b>States:</b>	662	654	654
<b>Premise 1 States:</b>		654	654
<b>Premise 2 States:</b>		95	95
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	7		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.80	5.24	5.24
<b>States:</b>	2,579	3,089	3,089
<b>Premise 1 States:</b>		3,089	3,089
<b>Premise 2 States:</b>		154	154
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	7		
<b>Size:</b>	5		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	31.75	33.29	—
<b>States:</b>	40,238	63,893	
<b>Premise 1 States:</b>		63,893	
<b>Premise 2 States:</b>		321	
<b> A :</b>		1	

## B.8 Subject 9

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	9		
<b>Size:</b>	2		
<b> P :</b>	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.32	2.30	2.30
<b>States:</b>	137	54	54
<b>Premise 1 States:</b>		54	54
<b>Premise 2 States:</b>		38	38
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	9		
<b>Size:</b>	3		
<b> P :</b>	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.90	3.14	3.14
<b>States:</b>	638	422	422
<b>Premise 1 States:</b>		95	95
<b>Premise 2 States:</b>		422	422
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	9		
<b>Size:</b>	4		
<b> P :</b>	10		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.97	5.11	5.11
<b>States:</b>	2,535	2,021	2,021
<b>Premise 1 States:</b>		154	154
<b>Premise 2 States:</b>		2,021	2,021
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	9		
<b>Size:</b>	5		
<b> P :</b>	12		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	32.16	31.56	—
<b>States:</b>	40,127	42,071	
<b>Premise 1 States:</b>		321	
<b>Premise 2 States:</b>		42,071	
<b> A :</b>		1	

## B.9 Subject 10

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	10		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.00	1.16	1.16
<b>States:</b>	794	176	176
<b>Premise 1 States:</b>		176	176
<b>Premise 2 States:</b>		102	102
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	10		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.13	1.23	1.33
<b>States:</b>	2,974	1,122	802
<b>Premise 1 States:</b>		364	802
<b>Premise 2 States:</b>		1,122	66
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	10		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.44	1.49	1.68
<b>States:</b>	10,920	5,559	1,513
<b>Premise 1 States:</b>		703	1,513
<b>Premise 2 States:</b>		5,559	327
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	10		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.25	3.10	—
<b>States:</b>	126,067	129,228	
<b>Premise 1 States:</b>		1,905	
<b>Premise 2 States:</b>		129,228	
<b> A :</b>		1	

## B.10 Subject 11

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	11		
<b>Size:</b>	2		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.02	2.91	2.91
<b>States:</b>	794	200	200
<b>Premise 1 States:</b>		185	185
<b>Premise 2 States:</b>		200	200
<b> A :</b>		9	9



<b>Verifier:</b>	LTSA		
<b>Subject:</b>	11		
<b>Size:</b>	3		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.13	11.54	1.42
<b>States:</b>	2,974	2,770	1,241
<b>Premise 1 States:</b>		373	1,241
<b>Premise 2 States:</b>		2,770	17
<b> A :</b>		21	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	11		
<b>Size:</b>	4		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.44	40.57	18.42
<b>States:</b>	10,920	18,638	3,629
<b>Premise 1 States:</b>		712	1,540
<b>Premise 2 States:</b>		18,638	1,030
<b> A :</b>		39	18

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	11		
<b>Size:</b>	5		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.41		—
<b>States:</b>	126,067	OOM	

## B.11 Subject 12

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	12		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.10	2.86	2.86
<b>States:</b>	1,150	265	265
<b>Premise 1 States:</b>		265	265
<b>Premise 2 States:</b>		198	198
<b> A :</b>		9	9

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	12		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.13	12.57	6.77
<b>States:</b>	3,984	2,736	1,096
<b>Premise 1 States:</b>		492	1,096
<b>Premise 2 States:</b>		2,736	141
<b> A :</b>		25	10

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	12		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.50	46.02	16.45
<b>States:</b>	13,798	18,370	1,862
<b>Premise 1 States:</b>		860	1,862
<b>Premise 2 States:</b>		18,370	922
<b> A :</b>		45	19

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	12		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.55	218.60	—
<b>States:</b>	156,746	138,537	
<b>Premise 1 States:</b>		2,101	
<b>Premise 2 States:</b>		138,537	
<b> A :</b>		122	

## B.12 Subject 13

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	13		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.02	1.12	1.12
<b>States:</b>	1,072	238	238
<b>Premise 1 States:</b>		238	238
<b>Premise 2 States:</b>		102	102
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	13		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.13	1.23	1.27
<b>States:</b>	3,693	1,122	1,003
<b>Premise 1 States:</b>		454	1,003
<b>Premise 2 States:</b>		1,122	66
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	13		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.47	1.50	1.66
<b>States:</b>	12,919	5,559	1,752
<b>Premise 1 States:</b>		812	1,752
<b>Premise 2 States:</b>		5,559	327
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	13		
<b>Size:</b>	5		
$ P $ :	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.39	3.08	—
<b>States:</b>	144,052	129,228	
<b>Premise 1 States:</b>		2,042	
<b>Premise 2 States:</b>		129,228	
$ A $ :		1	

## B.13 Subject 14

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	14		
<b>Size:</b>	2		
$ P $ :	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.16	1.12	1.12
<b>States:</b>	794	176	176
<b>Premise 1 States:</b>		176	176
<b>Premise 2 States:</b>		102	102
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	14		
<b>Size:</b>	3		
$ P $ :	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.12	1.23	1.31
<b>States:</b>	2,974	1,122	802
<b>Premise 1 States:</b>		364	802
<b>Premise 2 States:</b>		1,122	66
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	14		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.51	1.52	1.62
<b>States:</b>	10,920	5,559	1,513
<b>Premise 1 States:</b>		703	1,513
<b>Premise 2 States:</b>		5,559	327
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	14		
<b>Size:</b>	5		
<b> P :</b>	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.31	3.01	—
<b>States:</b>	126,067	129,228	
<b>Premise 1 States:</b>		1,905	
<b>Premise 2 States:</b>		129,228	
<b> A :</b>		1	

B.14 Subject 15

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	15		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.01	1.13	1.13
<b>States:</b>	794	176	176
<b>Premise 1 States:</b>		176	176
<b>Premise 2 States:</b>		102	102
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	15		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.14	1.24	1.32
<b>States:</b>	2,974	1,122	802
<b>Premise 1 States:</b>		364	802
<b>Premise 2 States:</b>		1,122	66
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	15		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.46	1.53	1.57
<b>States:</b>	10,920	5,559	1,513
<b>Premise 1 States:</b>		703	1,513
<b>Premise 2 States:</b>		5,559	327
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	15		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.24	3.07	—
<b>States:</b>	126,067	129,228	
<b>Premise 1 States:</b>		1,905	
<b>Premise 2 States:</b>		129,228	
<b> A :</b>		1	

## B.15 Subject 16

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	16		
<b>Size:</b>	2		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.02	1.07	1.07
<b>States:</b>	874	395	395
<b>Premise 1 States:</b>		395	395
<b>Premise 2 States:</b>		290	290
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	16		
<b>Size:</b>	3		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.13	1.27	1.44
<b>States:</b>	3,189	1,990	1,325
<b>Premise 1 States:</b>		1,352	1,325
<b>Premise 2 States:</b>		1,990	17
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	16		
<b>Size:</b>	4		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.43	1.57	15.99
<b>States:</b>	11,359	5,625	4,131
<b>Premise 1 States:</b>		5,625	2,731
<b>Premise 2 States:</b>		5,172	434
<b> A :</b>		1	16

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	16		
<b>Size:</b>	5		
$ P $ :	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.29	3.17	—
<b>States:</b>	127,790	63,985	
<b>Premise 1 States:</b>		33,686	
<b>Premise 2 States:</b>		63,985	
$ A $ :		1	

## B.16 Subject 18

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	18		
<b>Size:</b>	2		
$ P $ :	6		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.01	1.13	1.13
<b>States:</b>	794	176	176
<b>Premise 1 States:</b>		176	176
<b>Premise 2 States:</b>		102	102
$ A $ :		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	18		
<b>Size:</b>	3		
$ P $ :	8		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.12	1.24	1.32
<b>States:</b>	2,974	1,122	802
<b>Premise 1 States:</b>		364	802
<b>Premise 2 States:</b>		1,122	66
$ A $ :		1	1



<b>Verifier:</b>	LTSA		
<b>Subject:</b>	18		
<b>Size:</b>	4		
<b> P :</b>	10		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.50	1.57	1.68
<b>States:</b>	10,920	5,559	1,513
<b>Premise 1 States:</b>		703	1,513
<b>Premise 2 States:</b>		5,559	327
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	18		
<b>Size:</b>	5		
<b> P :</b>	12		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.35	3.08	—
<b>States:</b>	126,067	129,228	
<b>Premise 1 States:</b>		1,905	
<b>Premise 2 States:</b>		129,228	
<b> A :</b>		1	

## B.17 Subject 19

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.06	1.19	1.19
<b>States:</b>	117	272	272
<b>Premise 1 States:</b>		233	233
<b>Premise 2 States:</b>		272	272
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.19	1.34	1.47
<b>States:</b>	825	2,752	1,932
<b>Premise 1 States:</b>		961	1,932
<b>Premise 2 States:</b>		2,752	1,306
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.40	1.71	1.67
<b>States:</b>	4,905	26,624	11,882
<b>Premise 1 States:</b>		2,745	11,882
<b>Premise 2 States:</b>		26,624	3,776
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.86	4.25	—
<b>States:</b>	25,893	249,856	
<b>Premise 1 States:</b>		6,311	
<b>Premise 2 States:</b>		249,856	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.47	41.74	—
<b>States:</b>	125,469	2,293,760	
<b>Premise 1 States:</b>		12,577	
<b>Premise 2 States:</b>		2,293,760	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	8.51	1,749.56	—
<b>States:</b>	570,321	20,709,376	
<b>Premise 1 States:</b>		22,653	
<b>Premise 2 States:</b>		20,709,376	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	19		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	37.46		—
<b>States:</b>	2,467,665	OOM	

## B.18 Subject 20

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.06	1.22	1.22
<b>States:</b>	117	272	272
<b>Premise 1 States:</b>		233	233
<b>Premise 2 States:</b>		272	272
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.17	1.32	1.41
<b>States:</b>	825	2,752	1,932
<b>Premise 1 States:</b>		961	1,932
<b>Premise 2 States:</b>		2,752	1,306
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.40	1.63	1.62
<b>States:</b>	4,905	26,624	11,882
<b>Premise 1 States:</b>		2,745	11,882
<b>Premise 2 States:</b>		26,624	3,776
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.91	4.22	—
<b>States:</b>	25,893	249,856	
<b>Premise 1 States:</b>		6,311	
<b>Premise 2 States:</b>		249,856	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.42	42.78	—
<b>States:</b>	125,469	2,293,760	
<b>Premise 1 States:</b>		12,577	
<b>Premise 2 States:</b>		2,293,760	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	8.72	1,759.91	—
<b>States:</b>	570,321	20,709,376	
<b>Premise 1 States:</b>		22,653	
<b>Premise 2 States:</b>		20,709,376	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	20		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	36.03		—
<b>States:</b>	2,467,665	OOM	

## B.19 Subject 21

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.05	1.18	1.18
<b>States:</b>	117	272	272
<b>Premise 1 States:</b>		233	233
<b>Premise 2 States:</b>		272	272
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.17	1.45	1.42
<b>States:</b>	825	2,752	1,932
<b>Premise 1 States:</b>		961	1,932
<b>Premise 2 States:</b>		2,752	1,306
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.63	1.99	1.69
<b>States:</b>	4,905	26,624	11,882
<b>Premise 1 States:</b>		2,745	11,882
<b>Premise 2 States:</b>		26,624	3,776
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.95	4.26	—
<b>States:</b>	25,893	249,856	
<b>Premise 1 States:</b>		6,311	
<b>Premise 2 States:</b>		249,856	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.49	42.92	—
<b>States:</b>	125,469	2,293,760	
<b>Premise 1 States:</b>		12,577	
<b>Premise 2 States:</b>		2,293,760	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	8.92	1,751.77	—
<b>States:</b>	570,321	20,709,376	
<b>Premise 1 States:</b>		22,653	
<b>Premise 2 States:</b>		20,709,376	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	21		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	36.90		—
<b>States:</b>	2,467,665	OOM	

## B.20 Subject 22

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.07	1.19	1.19
<b>States:</b>	117	899	899
<b>Premise 1 States:</b>		899	899
<b>Premise 2 States:</b>		9	9
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.19	1.34	1.34
<b>States:</b>	825	7,082	7,082
<b>Premise 1 States:</b>		7,082	7,082
<b>Premise 2 States:</b>		81	81
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.41	1.70	1.70
<b>States:</b>	4,905	30,935	30,935
<b>Premise 1 States:</b>		30,935	30,935
<b>Premise 2 States:</b>		729	729
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.05	2.50	—
<b>States:</b>	25,893	97,004	
<b>Premise 1 States:</b>		97,004	
<b>Premise 2 States:</b>		6,561	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.46	4.59	—
<b>States:</b>	125,469	246,347	
<b>Premise 1 States:</b>		246,347	
<b>Premise 2 States:</b>		59,049	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	8.49	13.41	—
<b>States:</b>	570,321	540,854	
<b>Premise 1 States:</b>		540,854	
<b>Premise 2 States:</b>		531,441	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	36.13	122.26	—
<b>States:</b>	2,467,665	4,782,969	
<b>Premise 1 States:</b>		1,067,567	
<b>Premise 2 States:</b>		4,782,969	
<b> A :</b>		1	



<b>Verifier:</b>	LTSA		
<b>Subject:</b>	22		
<b>Size:</b>	9		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	294.72		—
<b>States:</b>	10,267,965	OOM	

## B.21 Subject 23

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	23		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	4.42	7.03	—
<b>States:</b>	52	130	
<b>Premise 1 States:</b>		111	
<b>Premise 2 States:</b>		36	
<b> A :</b>		10	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	23		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	3.68	359.20	359.20
<b>States:</b>	2,857	924,345	924,345
<b>Premise 1 States:</b>		39	39
<b>Premise 2 States:</b>		924,345	924,345
<b> A :</b>		38	38

## B.22 Subject 24

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.51	1.07	1.07
<b>States:</b>	18	12	12
<b>Premise 1 States:</b>		12	12
<b>Premise 2 States:</b>		4	4
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.90	1.17	3.28
<b>States:</b>	55	125	42
<b>Premise 1 States:</b>		43	40
<b>Premise 2 States:</b>		6	38
<b> A :</b>		3	13

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.05	1.83	12.77
<b>States:</b>	144	412	112
<b>Premise 1 States:</b>		109	112
<b>Premise 2 States:</b>		6	109
<b> A :</b>		3	55

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.04	2.73	26.38
<b>States:</b>	349	1,159	244
<b>Premise 1 States:</b>		259	112
<b>Premise 2 States:</b>		6	244
<b> A :</b>		3	55

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.04	3.45	—
<b>States:</b>	810	3,020	
<b>Premise 1 States:</b>		593	
<b>Premise 2 States:</b>		6	
<b> A :</b>		3	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	7		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.08	4.50	—
<b>States:</b>	1,831	7,652	
<b>Premise 1 States:</b>		1,327	
<b>Premise 2 States:</b>		6	
<b> A :</b>		3	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	8		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.09	7.12	—
<b>States:</b>	4,068	18,608	
<b>Premise 1 States:</b>		2,925	
<b>Premise 2 States:</b>		6	
<b> A :</b>		3	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	24		
<b>Size:</b>	9		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.20	14.16	—
<b>States:</b>	8,929	43,856	
<b>Premise 1 States:</b>		6,379	
<b>Premise 2 States:</b>		6	
<b> A :</b>		3	

## B.23 Subject 25

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	25		
<b>Size:</b>	2		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	0.99	20.39	20.39
<b>States:</b>	41	115	115
<b>Premise 1 States:</b>		109	109
<b>Premise 2 States:</b>		96	96
<b> A :</b>		61	61

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	25		
<b>Size:</b>	3		
<b> P :</b>	7		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.08	83.44	83.44
<b>States:</b>	97	1,681	1,681
<b>Premise 1 States:</b>		239	239
<b>Premise 2 States:</b>		1,681	1,681
<b> A :</b>		127	127

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	25		
<b>Size:</b>	4		
<b> P :</b>	11		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	557.38	—
<b>States:</b>	181	55,453	
<b>Premise 1 States:</b>		457	
<b>Premise 2 States:</b>		55,453	
<b> A :</b>		230	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	25		
<b>Size:</b>	5		
<b> P :</b>	16		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.33		—
<b>States:</b>	296	OOM	

## B.24 Subject 26

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	26		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.02	41.14	41.14
<b>States:</b>	41	80	80
<b>Premise 1 States:</b>		80	80
<b>Premise 2 States:</b>		77	77
<b> A :</b>		61	61

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	26		
<b>Size:</b>	3		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.12		104.20
<b>States:</b>	97	OOM	1,681
<b>Premise 1 States:</b>			195
<b>Premise 2 States:</b>			1,681
<b> A :</b>			104

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	26		
<b>Size:</b>	4		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.19		—
<b>States:</b>	181	OOM	

## B.25 Subject 27

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	27		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.01	12.79	12.79
<b>States:</b>	41	96	96
<b>Premise 1 States:</b>		79	79
<b>Premise 2 States:</b>		96	96
<b> A :</b>		45	45

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	27		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.06	46.94	68.73
<b>States:</b>	97	1,681	1,517
<b>Premise 1 States:</b>		241	140
<b>Premise 2 States:</b>		1,681	1,517
<b> A :</b>		91	113

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	27		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	153.54	—
<b>States:</b>	181	55,453	
<b>Premise 1 States:</b>		586	
<b>Premise 2 States:</b>		55,453	
<b> A :</b>		153	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	27		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.32		—
<b>States:</b>	296	OOM	

B.26 Subject 28

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	28		
<b>Size:</b>	2		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.02	12.67	12.67
<b>States:</b>	41	96	96
<b>Premise 1 States:</b>		79	79
<b>Premise 2 States:</b>		96	96
<b> A :</b>		45	45

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	28		
<b>Size:</b>	3		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.09	43.44	228.19
<b>States:</b>	97	1,681	958
<b>Premise 1 States:</b>		171	428
<b>Premise 2 States:</b>		1,681	958
<b> A :</b>		91	149

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	28		
<b>Size:</b>	4		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.18	119.17	—
<b>States:</b>	181	55,453	
<b>Premise 1 States:</b>		316	
<b>Premise 2 States:</b>		55,453	
<b> A :</b>		153	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	28		
<b>Size:</b>	5		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.32	386.87	—
<b>States:</b>	296	2,458,887	
<b>Premise 1 States:</b>		526	
<b>Premise 2 States:</b>		2,458,887	
<b> A :</b>		231	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	28		
<b>Size:</b>	6		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.55		—
<b>States:</b>	445	OOM	

## B.27 Subject 29

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	29		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.10	6.54	6.54
<b>States:</b>	41	95	95
<b>Premise 1 States:</b>		48	48
<b>Premise 2 States:</b>		95	95
<b> A :</b>		22	22

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	29		
<b>Size:</b>	3		
<b> P :</b>	4		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.10	108.23	161.37
<b>States:</b>	97	1,087	958
<b>Premise 1 States:</b>		262	239
<b>Premise 2 States:</b>		1,087	958
<b> A :</b>		92	81



<b>Verifier:</b>	LTSA		
<b>Subject:</b>	29		
<b>Size:</b>	4		
<b> P :</b>	5		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22		—
<b>States:</b>	181	OOM	

## B.28 Subject 30

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	30		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.01	13.67	13.67
<b>States:</b>	41	132	132
<b>Premise 1 States:</b>		63	63
<b>Premise 2 States:</b>		96	96
<b> A :</b>		39	39

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	30		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	2.12	71.65	248.45
<b>States:</b>	97	1,681	958
<b>Premise 1 States:</b>		151	428
<b>Premise 2 States:</b>		1,681	958
<b> A :</b>		83	149

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	30		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	221.80	—
<b>States:</b>	181	55,453	
<b>Premise 1 States:</b>		283	
<b>Premise 2 States:</b>		55,453	
<b> A :</b>		134	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	30		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.35		—
<b>States:</b>	296	OOM	

## B.29 Subject 31

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	31		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.03	1.13	1.13
<b>States:</b>	41	96	96
<b>Premise 1 States:</b>		96	96
<b>Premise 2 States:</b>		48	48
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	31		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.07	1.27	1.27
<b>States:</b>	97	900	900
<b>Premise 1 States:</b>		320	320
<b>Premise 2 States:</b>		900	900
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	31		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	1.64	—
<b>States:</b>	181	22,464	
<b>Premise 1 States:</b>		960	
<b>Premise 2 States:</b>		22,464	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	31		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.33	8.78	—
<b>States:</b>	296	691,488	
<b>Premise 1 States:</b>		2,688	
<b>Premise 2 States:</b>		691,488	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	31		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.55	1,387.08	—
<b>States:</b>	445	25,165,824	
<b>Premise 1 States:</b>		7,168	
<b>Premise 2 States:</b>		25,165,824	
<b> A :</b>		1	

## B.30 Subject 32

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	32		
<b>Size:</b>	2		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.01	1.13	1.13
<b>States:</b>	41	88	88
<b>Premise 1 States:</b>		88	88
<b>Premise 2 States:</b>		64	64
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	32		
<b>Size:</b>	3		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.10	1.26	1.34
<b>States:</b>	97	1,000	900
<b>Premise 1 States:</b>		344	368
<b>Premise 2 States:</b>		1,000	900
<b> A :</b>		1	1

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	32		
<b>Size:</b>	4		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.22	1.58	—
<b>States:</b>	181	20,736	
<b>Premise 1 States:</b>		1,216	
<b>Premise 2 States:</b>		20,736	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	32		
<b>Size:</b>	5		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.31	9.33	—
<b>States:</b>	296	537,824	
<b>Premise 1 States:</b>		3,968	
<b>Premise 2 States:</b>		537,824	
<b> A :</b>		1	

<b>Verifier:</b>	LTSA		
<b>Subject:</b>	32		
<b>Size:</b>	6		
<b> P :</b>	3		
	<b>Monolithic</b>	<b>Generalized</b>	<b>Best</b>
<b>Time:</b>	1.57	634.20	—
<b>States:</b>	445	16,777,216	
<b>Premise 1 States:</b>		12,160	
<b>Premise 2 States:</b>		16,777,216	
<b> A :</b>		1	