

Item Analysis for the Forty-Sixth
Michigan Mathematics Prize Competition
 Part I, October 9, 2002

PROBLEM	ANSWER	RESPONSES											
		A		B		C		D		E		No Response	
		N	%	N	%	N	%	N	%	N	%	N	%
1	C	1537	12.40	1244	10.03	5840	47.10	2615	21.09	1163	9.38	125	1.00
2	E	1377	11.09	828	6.67	2141	17.25	1835	14.78	6232	50.21	111	0.89
3	B	1130	9.21	6244	50.91	2222	18.12	1621	13.22	1047	8.54	260	2.08
4	D	2725	22.17	1800	14.64	1334	10.85	4900	39.86	1534	12.48	231	1.84
5	C	2690	22.00	2536	20.74	5193	42.47	1160	9.49	648	5.30	297	2.37
6	A	2418	19.67	2797	22.75	1909	15.53	1562	12.71	3607	29.34	231	1.84
7	E	557	4.49	778	6.27	1114	8.98	1063	8.57	8894	71.69	118	0.94
8	D	3973	32.12	1750	14.15	2773	22.42	1311	10.60	2562	20.71	155	1.24
9	B	1372	11.13	4790	38.85	3177	25.77	1827	14.82	1164	9.44	194	1.55
10	C	2706	21.82	1296	10.45	7102	57.27	434	3.50	863	6.96	123	0.98
11	A	4680	37.93	1853	15.02	2046	16.58	2641	21.41	1118	9.06	186	1.49
12	D	519	4.21	878	7.12	2101	17.04	6348	51.47	2487	20.17	191	1.53
13	D	1491	12.11	4022	32.67	3065	24.89	2658	21.59	1076	8.74	212	1.69
14	D	2278	18.40	3231	26.09	2450	19.79	4181	33.77	242	1.95	142	1.13
15	A	2043	16.59	2483	20.17	1957	15.90	4196	34.08	1632	13.26	213	1.70
16	C	1522	12.42	2985	24.37	3170	25.88	1499	12.24	3075	25.10	273	2.18
17	E	2597	20.94	1317	10.62	4434	35.76	701	5.65	3351	27.02	124	0.99
18	E	3045	24.61	1405	11.35	2283	18.45	2099	16.96	3542	28.62	150	1.20
19	C	2680	21.69	3032	24.54	4014	32.49	1340	10.85	1288	10.43	170	1.36
20	A	4065	32.98	4287	34.78	1593	12.92	1184	9.61	1197	9.71	198	1.58
21	A or D	1310	10.64	1545	12.55	5633	45.77	2012	16.35	1807	14.68	217	1.73
22	B	1203	9.69	3525	28.40	7058	56.86	452	3.64	175	1.41	111	0.89
23	D	2006	16.25	775	6.28	2398	19.43	4667	37.82	2495	20.22	183	1.46
24	B	1995	16.51	3876	32.09	2792	23.11	1964	16.26	1453	12.03	444	3.55
25	C	304	2.45	374	3.02	7431	59.91	3737	30.13	557	4.49	121	0.97
26	E	2886	23.68	1939	15.91	1553	12.74	1920	15.76	3888	31.91	338	2.70
27	E	1950	16.07	2390	19.69	3072	25.31	2447	20.16	2279	18.78	386	3.08
28	B	3660	29.58	3573	28.88	878	7.10	3737	30.21	524	4.24	152	1.21
29	C	4554	37.15	2343	19.11	2240	18.27	1183	9.65	1940	15.82	264	2.11
30	E	2122	17.32	2966	24.20	2123	17.32	1328	10.84	3715	30.32	270	2.16
31	A	2096	17.19	3112	25.52	2287	18.76	1292	10.60	3406	27.93	331	2.64
32	C	1844	15.16	2324	19.10	4823	39.64	2482	20.40	693	5.70	358	2.86
33	B	2145	17.64	1977	16.26	3025	24.88	1998	16.43	3015	24.79	364	2.91
34	C	1866	15.41	3527	29.12	3056	25.23	1955	16.14	1707	14.09	413	3.30
35	E	1693	13.94	2543	20.94	2527	20.81	1602	13.19	3778	31.11	381	3.04
36	D	1260	10.30	1770	14.47	2722	22.26	4376	35.78	2101	17.18	295	2.36
37	B	1734	14.22	4160	34.11	1884	15.45	1771	14.52	2646	21.70	329	2.63
38	A	3855	31.48	4322	35.30	2716	22.18	892	7.29	459	3.75	280	2.24
39	A	1975	16.37	2434	20.17	3400	28.17	2823	23.39	1436	11.90	456	3.64
40	D	1616	13.20	2976	24.30	3407	27.82	3170	25.88	1078	8.80	277	2.21

Notes: Numbers for correct responses are **bolded**.
 Percentage of A-E responses taken from sum of A-E responses.
 Percentage of "No Response" taken from number of participants.