

NEWSLETTER

VOL 40 NO. 3

MIDDLE/JR HIGH SCHOOL

Σ SIGMA

2018 —2019

MATHEMATICS LEAGUE

NEXT CONTEST DATE : January 7—11, 2019

NOTE: Comment on Cumulative Scores. For clarification, cumulative scores are the scores an individual or grade has earned on both 1 & 2 contests - not on any one contest. The cutoff score after contest #3 is 19 for all grades.

**REPORT INDIVIDUAL STUDENT CUMULATIVE SCORES OF
19 OR ABOVE — — GRADES 6, 7, 8 AND 9.**

CONTEST #2 RESULTS

INDIVIDUAL PERFECT SCORES ON CONTEST #2

6 TH Grade	21	8 TH Grade	57
7 TH Grade	34	9 TH grade	0

CUMULATIVE SCORES — — CONTESTS 1-2

	<u>SCORES</u>			
	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
Gr. 6	2	8	20	26
Gr. 7	2	15	21	18
Gr. 8	2	12	26	17
Gr. 9	0	0	1	0

!!!! NOTE !!!! TO MAXIMIZE YOUR TEAM SCORE FOR EACH GRADE, LIST AT LEAST 12 STUDENT SCORES, IF YOU HAVE MORE THAN 12 STUDENTS WHO COMPETED IN THAT GRADE. PLACE THEM IN NUMERICAL ORDER ON THE REPORTING FORM. AWARDS ARE GIVEN FOR EACH GRADE SO MAXIMIZE YOUR SCORE.

Word of Encouragement: Perhaps you have students who are only getting 1, 2 or 3 of the problems correct. **Don't let that discourage** your students and/or you the teacher. The problems are not written with the idea that all the students will earn a 6, 7 or 8 on every test (although there are some schools that have the students scoring very, very high.) For students to achieve well in problem-solving (seeing problems that do not necessarily appear in the mathematics textbook), it takes LOTS of practice in solving them.

To use an athletic comparison – for a basketball player to be a good shooter, he/she must practice shooting that basketball a “zillion” times – not just a few times. The same is true for problem-solving – students must solve a “zillion” problems to get really good at it. Now, that might be a slight exaggeration but just as practice improves one athletically, so does practice in problem-solving improve one mathematically.

Perhaps you don't have the time to have students solve a “zillion” such problems, nor do you have the resources for such problems, but I hope you realize that you are giving your students an wonderful opportunity to improve in that area. And it does pay off, especially if they are involved in MATHCOUNTS and/or in high school when they take the ACT/SAT tests, etc.

Just keep encouraging them to do their best and to learn from the experience. We greatly appreciate **your willingness** to expose your students to problem-solving. We thank you and your students should thank you – even for a score of 1!

MATHEMATICS TIDBIT:

Try this with your students: Have each student pick a prime number greater than 3. (Encourage them to pick different ones among the group.) They are to, then, square the number and subtract one from the result. What conjecture can the students make?

(Answer; Students should conjecture that every result is a multiple of 24 (divisible by 24)).

The next question would be to prove it. Hints: Since it means that 24 is a factor of $(p^2 - 1)$, 24 would be a factor of $(p + 1)(p - 1)$. Further, it means that 3 is a factor of the result and 8 is a factor of the result. Can your students prove it with or without those hints? If you want a proof of it, let me know (lpenner@windstream.net) and I will provide one.

SUMMARY OF RESULTS BY SCHOOL – CONTEST #2

In the following table, the column labeled GR represents the grades of participation by each school; the TTS column is the TEAM SCORE for contest #3, the 6TS, 7TS, 8TS, and 9TS columns represent the TEAM SCORE for each grade for Contest #2; the TCS column is the TEAM CUMULATIVE SCORE; the 6CS, 7CS, 8CS, and 9CS columns represent the CUMULATIVE SCORE through contest #2.

GR	ST	CITY	SCHOOL	TTS	6TS	7TS	8TS	9TS	TCS	6CS	7CS	8CS	9CS
789	AL	Mountain Brook	Mountain Brook JH						0	0	0	0	0
78	AZ	Chandler	Willis JH	64		62	51		135	0	129	112	0
78	AZ	Queen Creek	Sossaman MS						32	0	6	26	0
78	AZ	Queen Creek	Payne JHS	63		49	58		128	0	113	112	0
9	CA	Hillsborough	Crystal Springs Uplands						0	0	0	0	0
789	CA	Los Altos	Egan						0	0	0	0	0
9	CA	La Jolla	Country Day Sch					55	0	0	0	0	127
678	CA	La Jolla	Country Day Sch						80	68	70	68	0
789	CA	Los Angeles	Berkeley Hall						0	0	0	0	0
78	CA	Los Angeles	Harvard-Westlake	71		36	44		147	0	91	93	0
678	CA	Menlo Park	La Entrada MS	58	6	27	35		117	11	59	67	0
678	CA	Oakland	Head-Royce						0	0	0	0	0
678	CA	Palos Verdes	Intermediate	93	86	75	88		181	167	154	170	0
678	CA	Sacramento	Brookfield						0	0	0	0	0
6789	CA	San Francisco	Xian Yun Acad of Arts						31	9	5	10	12
678	CA	South Pasadena	South Pasadena MS	93	87	87	90		182	169	177	173	0
678	CT	Wolcott	Tyrrell MS	77	67	60	63		141	127	109	126	0
678	DC	Washington	St Albans School	80	66	66	76		160	129	139	151	0
89	DE	Wilmington	Tower Hill School	62				32	141	0	0	127	73
678	FL	Miami	Palmer Trinity	22	5	0	10		60	28	13	42	0
678	FL	North Miami	Holy Cross Lutheran	45	32	26	9		81	54	50	15	0
678	FL	Tallahassee	Community Christian	59	37	33	37		120	79	74	84	0
678	FL	Tallahassee	Deer Lake	93	43	88	90		184	93	174	169	0
678	FL	Tallahassee	Fairview MS	90	80	37	85		180	174	77	164	0
678	FL	Tallahassee	Montford MS	48	26	8	30		101	72	18	58	0
678	FL	Tampa	Franklin Boys Prep Acad						0	0	0	0	0
678	FL	Vero Beach	St. Edward's						0	0	0	0	0
678	FL	Winter Park	Trinity Prep						128	83	99	101	0
78	HI	Kapolei	Kapolei MS						53	0	48	45	0
78	IA	Coralville	Northwest JH'S	88		76	94		179	0	152	185	0
789	IA	Madrid	Madrid Jr/Sr	24		15	8	3	43	0	29	14	6
78	IA	Neola	Tri-Center	38		31	28		68	0	49	54	0
	IL	Edwardsville	Liberty MS						0	0	0	0	0
678	IL	Edwardsville	Lincoln MS						0	0	0	0	0
78	IL	Libertyville	Highland MS	69		49	59		164	0	115	128	0
678	IN	Terre Haute	Honey Creek MS	92	78	78	90		179	158	162	166	0
678	IN	Wabash	Northfield Jr/Sr						0	0	0	0	0
67	KS	Lenexa	Trailridge MS						71	0	64	77	0
78	KS	Shawnee Mission	Indian Woods MS	80	37	43			163	0	80	90	0
678	KS	Shawnee Mission	Hocker Grove MS						0	0	0	0	0
67	KY	Edgewood	St Pius X	43	21	35			87	39	69	0	0
678	MA	Andover	Pike School						69	17	31	26	0
	MA	Needham	St. Sebastian's						0	0	0	0	0
678	MA	West Bridgewater	West Bridgewater MS						0	0	0	0	0
678	MD	Silver Spring	Takoma Park MS						96	93	94	96	0
678	MI	Bloomfield Hills	East Hills MS	67	66	66	44		136	127	124	104	0
67	MI	Novi	Novi Meadows	83	72	89			167	153	163	0	0
678	MI	Quincy	Quincy MS						0	0	0	0	0
678	MN	Willmar	Willmar MS	67	63	59	47		136	120	117	101	0
678	MO	Chesterfield	Parkway Central M	77	81	72	55		157	164	149	114	0
678	MO	Independence	Bingham MS						0	0	0	0	0
678	MO	Kansas City	The Barstow School						0	0	0	0	0
678	MO	St. Louis	Visitation Academy	30	13	3	14		65	25	11	29	0
678	MO	St. Peters	Fort Zumwalt South	45	15	4	51		95	31	9	111	0
6789	MS	Jackson	Jackson Prep	69	39	56	60	47	143	87	107	128	122
6789	NC	Winston Salem	Summit School	73	68	49	60	48	144	131	102	123	103
78	NE	Firth	Norris MS	68		60	61		126	0	109	113	0
9	NE	Lincoln	East					58	0	0	0	0	137
678	NE	Lincoln	Lux MS	89	71	82	79		168	138	154	146	0
678	NE	Lincoln	Mickle MS						89	52	26	31	0
678	NE	Omaha	Brownell Talloot	61	43	51	45		132	85	107	92	0
678	NE	Omaha	St. Margaret Mary						47	7	27	30	0
678	NE	Omaha	Christ the King						58	44	42	39	0
78	NE	Papillion	Liberty MS	68		63	55		130	0	119	112	0
78	NE	Papillion	Papillion MS	77		65	69		141	0	116	144	0
678	NJ	Brick	Lake Riviera MS	65	55	57	47		126	114	118	93	0
78	NJ	Brick	Veterans Memorial						0	0	0	0	0
6789	NJ	Hamilton	Crockett MS	68	49	55	68	42	142	100	110	138	96
678	NJ	Hamilton Square	St. Gregory the Great						68	45	48	54	0
78	NJ	Marlboro	Marlboro MS						88	0	81	75	0
678	NJ	Middletown	Thompson MS	54	47	16	28		109	99	58	44	0
78	NJ	Morganville	Marlboro Memorial	45		76	0		127	0	150	64	0
678	NJ	Tinton Falls	Ranney School	54	16	22	32		88	16	37	73	0
678	NJ	Wycoff	Bergen County Acad						0	0	0	0	0
789	NY	Floral Park	Floral Park Memorial	36		4	14	27	87	0	13	36	72
9	NY	Floral Park	Sewanhaka					9	0	0	0	0	18
78	NY	Garden City	Garden City MS						35	0	41	3	0
678	NY	Long Island	Sch Q300	91	88	78	83		179	174	165	163	0
789	NY	New Hartford	Perry JHS	53		36	51	17	121	0	90	107	70
678	NY	New York	PS334 Anderson Sch	79	61	34	26		164	131	84	52	0
67	NY	Roslyn Heights	Willets Road Sch	52	31	45			123	71	106	0	0
678	OH	Ashville	Teays Valley East						0	0	0	0	0
678	OH	Canal Winchester	Winchester MS	65	56	54	59		136	131	113	106	0
678	OH	Cincinnati	Seven Hills MS	71	57	62	63		149	118	124	134	0
678	OH	Commercial Pt	Teays Valley West	62	53	45	59		126	105	98	122	0
678	OH	Williamsport	Westfall MS	51	49	33	34		98	102	68	63	0
678	OK	Tulsa	University Sch	71	54	44	38		139	105	89	76	0
	OR	Portland	Robert Gray						0	0	0	0	0
9	PA	Malvern	Great Valley HS					29	0	0	0	0	58
678	SC	Columbia	Dent MS						0	0	0	0	0
678	TN	Nashville	Holy Rosary Acad	60	47	46	49		121	90	90	97	0
678	TX	Addison	Greenhill Sch						63	62	14	28	0
678	TX	Arlington	Oakridge Sch						65	55	49	57	0
89	TX	Bedford	Bedford JH						9	0	0	0	9
789	UT	Highland	Mountain Ridge JHS						80	0	61	67	64
7	CA	Homeschool	Foster City					8	0	0	8	0	0

TOP SCHOOLS RANKING CONTEST #2

GRADE 6 (CONTEST #2)

NY	Long Island City	30th Avenue	Q300	88
CA	South Pasadena	South Pasadena	MS	87
CA	Palos Verdes Estates	Intermediate		86
MO	Chesterfield	Parkway Central	M	81
FL	Tallahassee	Fairview	MS	80
IN	Terre Haute	Honey Creek	MS	78
MI	Novi	Novi Meadows		72
NE	Lincoln	Lux	MS	71
NC	Winston Salem	Summit School		68
CT	Wolcott	Tyrrell	MS	67
DC	Washington	St Albans School		66
MI	Bloomfield Hills	East Hills	MS	66
MN	Willmar	Willmar	MS	63
NY	New York	PS334 Anderson	Sch	61
OH	Cincinnati	Seven Hills	MS	57
OH	Canal Winchester	MS		56
NJ	Brick	Lake Riviera	MS	55
OK	Tulsa	University	Sch	54
OH	Commercial Pt	Teays Valley	West	53
NJ	Hamilton	Crockett	MS	49
OH	Williamsport	Westfall	MS	49

GRADE 7 (CONTEST # 2)

MI	Novi	Novi Meadows		89
FL	Tallahassee	Deer Lake		88
CA	South Pasadena	South Pasadena	MS	87
NE	Lincoln	Lux	MS	82
NY	Long Island City	The Sch	Q300	78
IN	Terre Haute	Honey Creek	MS	78
IA	Coralville	Northwest JH'S		76
NJ	Morganville	Marlboro Memorial		76
CA	Palos Verdes Estates	Intermediate		75
MO	Chesterfield	Parkway Central	M	72
DC	Washington	St Albans School		66
MI	Bloomfield Hills	East Hills	MS	66
NE	Papillion	Papillion	MS	65

NE	Papillion	Liberty	MS	63
OH	Cincinnati	Seven Hills	MS	62
AZ	Chandler	Willis	JH	62
CT	Wolcott	Tyrrell	MS	60
NE	Firth	Norris	MS	60
MN	Willmar	Willmar	MS	59
NJ	Brick	Lake Riviera	MS	57

GRADE 8 (CONTEST # 2)

IA	Coralville	Northwest JH'S		94
FL	Tallahassee	Deer Lake		90
CA	South Pasadena	South Pasadena	MS	90
IN	Terre Haute	Honey Creek	MS	90
CA	Palos Verdes Estates	Intermediate		88
FL	Tallahassee	Fairview	MS	85
NY	Long Island	Sch	Q300	83
NE	Lincoln	Lux	MS	79
DC	Washington	St Albans School		76
NE	Papillion	Papillion	MS	69
NJ	Hamilton	Crockett	MS	68
OH	Cincinnati	Seven Hills	MS	63
CT	Wolcott	Tyrrell	MS	63
NE	Firth	Norris	MS	61
MS	Jackson	Jackson Prep		60
NC	Winston Salem	Summit School		60
OH	Canal Winchester	Canal	MS	59
IL	Libertyville	Highland	MS	59
OH	Commercial Pt	Teays Valley	West	59
AZ	Queen Creek	Payne	JHS	58
DE	Wilmington	Tower Hill	School	58

GRADE 9 (CONTEST # 2)

NE	Lincoln	East		58
CA	La Jolla	Country Day	Sch	55
NC	Winston Salem	Summit School		48
MS	Jackson	Jackson Prep		47
NJ	Hamilton	Crockett	MS	42

DIVISION 2 (CONTEST # 2)

IA	Coralville	Northwest JH'S		88
MI	Novi	Novi Meadows		83
KS	Shawnee Mission	Indian Woods	MS	80
NE	Papillion	Papillion	MS	77
CA	Los Angeles	Harvard-Westlake		71
IL	Libertyville	Highland	MS	69
NE	Firth	Norris	MS	68
NE	Papillion	Liberty	MS	68
AZ	Chandler	Willis	JH	64
AZ	Queen Creek	Payne	JHS	63
DE	Wilmington	Tower Hill	School	62
NY	New Hartford	Perry	JHS	53
NY	Roslyn Heights	Willets Road	Sch	52
NJ	Morganville	Marlboro Memorial		45
KY	Edgewood	St Pius X		43
IA	Neola	Tri-Center		38

DIVISION 3 (CONTEST #2)

CA	South Pasadena	South Pasadena	MS	96
CA	Palos Verdes Estates	Intermediate		93
CA	South Pasadena	South Pasadena	MS	93
FL	Tallahassee	Deer Lake		93
IN	Terre Haute	Honey Creek	MS	92
NY	Long Island City	Sch	Q300	91
FL	Tallahassee	Fairview	MS	90
NE	Lincoln	Lux	MS	89
DC	Washington	St Albans School		80
NY	New York	PS334 Anderson	Sch	79
CT	Wolcott	Tyrrell	MS	77
MO	Chesterfield	Parkway Central	M	77
NC	Winston Salem	Summit School		73
OH	Cincinnati	Seven Hills	MS	71
OK	Tulsa	University	Sch	71
MS	Jackson	Jackson Prep		69
NJ	Hamilton	Crockett	MS	68
MI	Bloomfield Hills	East Hills	MS	67
MN	Willmar	Willmar	MS	67
NJ	Brick	Lake Riviera	MS	65
OH	Canal Winchester	Winchester	MS	65

TOP SCHOOLS RANKING CONTESTS 1--2

GRADE 6 (CUMULATIVE)

FL	Tallahassee	Fairview MS	174
NY	Long Island	Sch Q300	174
CA	South Pasadena	South Pasadena MS	169
CA	Palos Verdes Estates	Intermediate	167
MO	Chesterfield	Parkway Central M	164
IN	Terre Haute	Honey Creek MS	158
MI	Novi	Novi Meadows	153
NE	Lincoln	Lux MS	138
NC	Winston Salem	Summit School	131
OH	Canal Winchester	Canal MS	131
NY	New York	PS334 Anderson Sch	131
DC	Washington	St Albans School	129
CT	Wolcott	Tyrrell MS	127
MI	Bloomfield Hills	East JHills MS	127
MN	Willmar	Willmar MS	120
OH	Cincinnati	Seven Hills MS	118
NJ	Brick	Lake Riviera MS	114
OK	Tulsa	University Sch	105
OH	Commercial Pt	Teays Valley West	105
OH	Williamsport	Westfall MS	102

GRADE 7 (CUMULATIVE)

CA	South Pasadena	South Pasadena MS	177
FL	Tallahassee	Deer Lake	174
NY	Long Island City	Q300	165
MI	Novi	Novi Meadows	163
IN	Terre Haute	Honey Creek MS	162
CA	Palos Verdes Estates	Intermediate	154
NE	Lincoln	Lux MS	154
IA	Coralville	Northwest JH'S	152
NJ	Morganville	Marlboro Memorial	150
MO	Chesterfield	Parkway Central M	149
DC	Washington	St Albans School	139
AZ	Chandler	Willis JH	129
MI	Bloomfield Hills	East Hills MS	124
OH	Cincinnati	Seven Hills MS	124
NE	Papillion	Liberty MS	119

NJ	Brick	Lake Riviera MS	118
MN	Willmar	Willmar MS	117
NE	Papillion	Papillion MS	116
IL	Libertyville	Highland MS	115
OH	Canal Winchester	MS	113
AZ	Queen Creek	Payne JHS	113

GRADE 8 (CUMULATIVE)

IA	Coralville	Northwest JH'S	185
CA	South Pasadena	South Pasadena MS	173
CA	Palos Verdes Estates	Intermediate	170
FL	Tallahassee	Deer Lake	169
IN	Terre Haute	Honey Creek MS	166
FL	Tallahassee	Fairview MS	164
NY	Long Island City	Sch Q300	163
DC	Washington	St Albans School	151
NE	Lincoln	Lux MS	146
NE	Papillion	Papillion MS	144
NJ	Hamilton	Crockett MS	138
OH	Cincinnati	Seven Hills MS	134
IL	Libertyville	Highland MS	128
MS	Jackson	Jackson Prep	128
DE	Wilmington	Tower Hill School	127
CT	Wolcott	Tyrrell MS	126
NC	Winston Salem	Summit School	123
OH	Commercial Pt	Teays Valley West	122
MO	Chesterfield	Parkway Central M	114
NE	Firth	Norris MS	113

GRADE 9 (CUMULATIVE)

NE	Lincoln	East	137
CA	La Jolla	Country Day Sch	127
MS	Jackson	Jackson Prep	122
NC	Winston Salem	Summit School	103
NJ	Hamilton	Crockett MS	96

DIVISION 3 (CUMULATIVE)

FL	Tallahassee	Deer Lake	184
CA	South Pasadena	South Pasadena MS	182
CA	Palos Verdes Estates	Intermediate	181
FL	Tallahassee	Fairview MS	180
IN	Terre Haute	Honey Creek MS	179
NY	Long Island City	Sch Q300	179
NE	Lincoln	Lux MS	168
MI	Novi	Novi Meadows	167
IL	Libertyville	Highland MS	164
KS	Shawnee Mission	Indian Woods MS	163
DC	Washington	St Albans School	160
MO	Chesterfield	Parkway Central M	157
OH	Cincinnati	Seven Hills MS	149
CA	Los Angeles	Harvard-Westlake	147
NC	Winston Salem	Summit School	144
MS	Jackson	Jackson Prep	143
NJ	Hamilton	Crockett MS	142
NE	Papillion	Papillion MS	141
CT	Wolcott	Tyrrell MS	141
OH	Canal Winchester	MS	136
MN	Willmar	Willmar MS	136
MI	Bloomfield Hills	East Hills MS	136
AZ	Chandler	Willis JH	135

DIVISION 2 (CUMULATIVE)

IA	Coralville	Northwest JH'S	179
DE	Wilmington	Tower Hill School	141
OK	Tulsa	University Sch	139
OH	Commercial Pt	Teays Valley West	126
NJ	Middletown	Thompson MS	109
FL	Tallahassee	Montford MS	101
MO	St. Peters	Fort Zumwalt South	95
NJ	Tinton Falls	Ranney School	88
NJ	Marlboro	Marlboro MS	88
NY	Floral Park	Floral Park Memorial	87
KS	Lenexa	Trailridge MS	71
MO	St. Louis	Visitation Academy	65
FL	Miami	Palmer Trinity	60
HI	Kapolei	Kapolei MS	53
IA	Madrid	Madrid Jr/Sr	43
AZ	Queen Creek	Sossaman MS	32