"Math is Cool" Championships – 2012-13

Sponsored by:

4th Grade – April 19, 2013

GENERAL INSTRUCTIONS/INFORMATION applying to all tests and awards:

- *Good sportsmanship is expected throughout the competition by all involved; both competitors and observers. Display of poor sportsmanship may result in disqualification.*
- *Calculators or any other aids may not be used on any portion of this contest.*
- *Unless stated otherwise, all rational, non-integer answers need to be expressed as reduced common fractions except in case of problems dealing with money. In the case of problems requiring dollar answers, answer as a decimal rounded to the nearest hundredth (ie, to the nearest cent).*
- *For fifth and sixth grade, all fractions and ratios must be reduced to simplest form.*
- *Counting or natural numbers refer to the numbers 1,2,3,4 and so on – zero (0) is NOT included.*
- *Units are not necessary as part of your answer unless it is a problem that deals with time and in that case, a.m. or p.m. is required. However, if you choose to use units, they must be correct.*
- *Leave all answers in terms of π where applicable.*
- *Do not round any answers unless stated otherwise.*
- *Record all answers on the colored cover sheets in the answer column only.*
- *Make sure all answer sheets have all the information (name, team number, etc.) at the top of the sheet filled out.*
- *Tests will be scored as a 0 if answers are not recorded on the answer sheets.*
- *Blank answer sheets and answer sheets with no name will be scored as a 0.*
- *Individual Awards are determined by the sum of an individual's Mental Math score and Individual Test score. Individual Mental Math contributes to approximately 8% of the individual score. Individual ties are broken based on the following in this order: total individual points, total questions answered correctly, individual Mental Math score, total correct from Individual Test problems 31-40, total correct from Individual Test questions 16-30, single questions answered correctly on the Individual Test starting with question 40 and working backwards.*
- *Team Awards are determined by the team score which is calculated by 2(Top 3 Mental Math scores) + 2(Multiple Choice) + 6(Team) + 3(Relay) + (College Bowl) for approximate weights of 25%, 20%, 30%, 15% and 10% respectively. Team ties are broken based on highest event score in order of events starting with Mental Math.*

MENTAL MATH - 30 seconds per question – 25% of team score

When it is time to begin, the proctor will read the first question twice. You may not do any writing or talking while arriving at a solution. Once you have a solution, record it on the sheet in front of you. ***You may not change or cross out answers once you have written an answer down. If there are eraser marks, write-overs, or crossed-out answers, they will be marked wrong****. Once all students have laid their pencils on the desk, another question will be asked. If a student doesn't lay his/her pencil down, the maximum wait time is 30 seconds after completion of the second reading of the question before another question is asked. You may continue to work on a problem while the next question is being read. The value of each question is a one or zero. Each student will be asked the same eight questions. Individual scores used to determine individual placing will be determined by the sum of the Mental Math score and the Individual Test score for each individual. In addition, the top three Mental Math scores from one team will be totaled and doubled and will contribute to 25% of the team score.*

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4th Grade – April 19, 2013

Mental Math Contest

MENTAL MATH - 30 seconds per question – 25% of team score

When it is time to begin, the proctor will read the first question twice. You may not do any writing or talking while arriving at a solution. Once you have a solution, record it on the sheet in front of you. ***You may not change or cross out answers once you have written an answer down. If there are eraser marks, write-overs, or crossed-out answers, they will be marked wrong.*** *Once all students have laid their pencils on the desk, another question will be asked. If a student doesn't lay his/her pencil down, the maximum wait time is 30 seconds after completion of the second reading of the question before another question is asked. You may continue to work on a problem while the next question is being read. The value of each question is a one or zero. Each student will be asked the same eight questions. Individual scores used to determine individual placing will be determined by the sum of the Mental Math score and the Individual Test score for each individual. In addition, the top three Mental Math scores from one team will be totaled and doubled and will contribute to 25% of the team score.*

	Question
1	What is the largest counting number that will divide into both 12 and 16 without a remainder?
2	What is the perimeter of a regular octagon with side length 8 units?
3	What is the average of 12 and 20?
4	Sandra will choose one of thirty-one flavors of ice cream. She then has to decide between three types of cones. How many different combinations of ice cream flavors and cones can she choose?
5	A robot solves 5 math problems every minute. At his rate, how many problems can it solve in 300 seconds?
6	What is the product of 25 and 36?
7	What is the area, in square inches, of a square with a perimeter of 28 inches?
8	How many ways are there to seat 4 students in a line of 5 desks?

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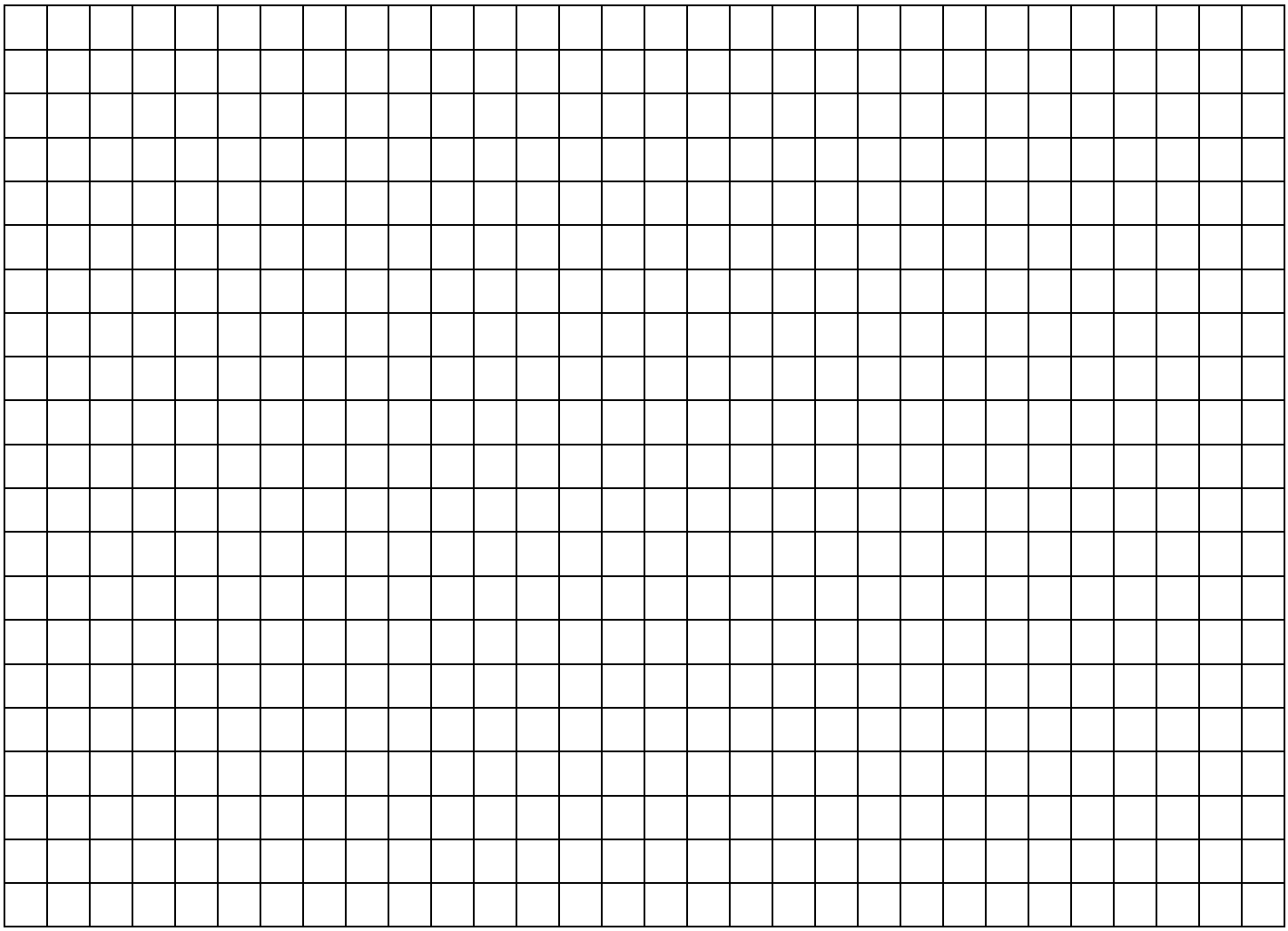
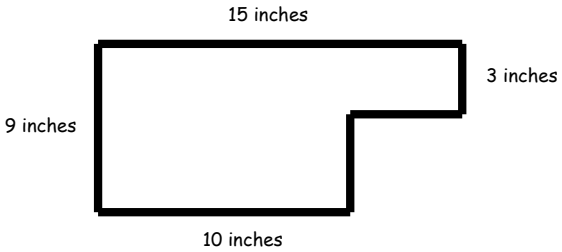
Individual Contest

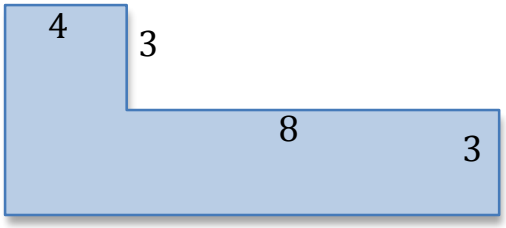
INDIVIDUAL TEST - 35 minutes – 40 problems

You may NOT be seated next to anyone from your school. If you are, MOVE NOW to avoid being disqualified! When you are prompted to begin, tear off the colored sheet and begin testing. Make sure your name and school are recorded on the answer sheet. The raw score will be 2 points for correct answers to problems 1-30 and 3 points for 31-40. Record your answers on the score sheet. No talking during the test. You will be given a 5 minute time warning.

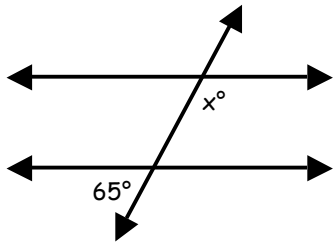
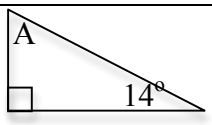


Record all answers on the colored cover sheet.

	Questions 1-30: 2 points each
1	What digit is in the ten thousands place of the following number: 31,784,260?
2	What is the remainder when 23,748 is divided by 5?
3	Find the next number in this addition pattern: 5, 18, 31, _____.
4	What is 4,685 minus 2,521?
5	What fraction of the square is shaded if the base of the triangle is half the base of the square? 
6	Choose the term from the parentheses that makes the following sentence true. The fraction 6/7 is (less than, equal to, greater than) the fraction 8/9.
7	How many quarters are equal to 53 dollars and 75 cents?
8	What is the least common multiple of the numbers: 15 and 25?
9	Jane has three quarters, three dimes, three nickels and three pennies. How much money does she have in dollars and cents?
10	Driving to Portland, we drove 50 mph for 2 hours followed by 60 mph for 1 hour. How far did we travel, in miles?
11	There are 4 cups to a quart. How many cups are in a gallon?
12	Find the perimeter, in inches, of the following figure. Angles that appear to be $90°$ are $90°$. 
13	George gave Barbara 13 flowers but still had 18 flowers left. How many flowers did George have to start with?
14	When a coin is flipped twice, what is the probability that there is exactly one head? Answer as a fraction.
15	Carol is going to the movies. How many dollars in all will Carol need for the bus ride, some popcorn, and a movie ticket if the bus ride costs $2.25, popcorn costs $3.50, and the movie ticket costs $7.75?
16	Let: A = 2, B = 4, C = 9. What is $A \times B + C$?

17	What is $\frac{3(8+7)-3}{7}$?
18	Jayze had 24 apples. He ate half of them, and then ate one-sixth of the remaining apples. How many apples were left over?
19	James drove the 10 miles to school in 25 minutes. In miles per hour, what was his average speed?
20	Kurt played Pac-Man for 3 hours. Every two minutes costs 63 cents. In dollars, how much money has Kurt spent?
21	Tom's homework problem said to divide a number by 4. Tom misread the problem and instead subtracted 4 to get a value of 20. What was the correct answer to the problem?
22	Find the area of the following shape, which is made of two rectangles side by side. 
23	How many counting numbers divide into thirty without a remainder?
24	Dylan has scores 90, 90, 74, and 82 on his tests. What is his average score?
25	What is the largest two-digit number that has a remainder of 12 when it is divided by 13?
26	My bouquet of ten flowers has 2 flowers with four petals each, 2 flowers with five petals each and 6 flowers with seven petals each. What is the average number of petals per flower in my bouquet?
27	 School ends at the time indicated above. It begins six and one-half hours earlier. What time does it begin? (No AM or PM required)
28	George tossed two fair six-sided dice. As a reduced fraction, what is the probability that the product of the numbers showing is odd?
29	A rectangular piece of fabric that is 2 **yards** by 10 **yards** is cut into smaller rectangular pieces of 1 **foot** by 2 **feet**. How many smaller pieces are made?
30	Which of these numbers is smallest: three-fifths, five-eighths or two-thirds?

Challenge Questions: 3 points each

31	Mrs. Lovett sells each of her pies at the same price. If she sells 16 pies in one day and receives $100, what is the selling price in dollars of each pie?
32	Tom has as many sisters as he has brothers. His sister Mary has three times as many brothers as she has sisters. How many children are there in the family?
33	What is the volume in cubic centimeters of a cube with side length 7 centimeters?
34	Two cards are drawn from a standard deck of 52 cards, without replacing the first card before drawing the second. As a reduced fraction, what is the probability that both cards are clubs?
35	What is 2 to the fifth power plus 5 to the second power?
36	What is the value of x, given that the diagram shows two parallel lines cut by a third line? 
37	What is the measure of angle A, in degrees? 
38	What is the sum $50 - 49 + 48 - 47 + \cdots + 2 - 1$?
39	One angle of an isosceles triangle measures 120 degrees. What is the measure of one of the other angles, in degrees?
40	In a class with 30 students, the average score on a math test was 86. If the average score of the girls was 90 and the average score of the boys was 80, how many girls are in the class?

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4th Grade – April 19, 2013

Team Multiple Choice Contest

Use the following information to solve problems 1-3.

Tai-Shone's Burger Joint sells customizable hamburgers with many optional ingredients. The base cost of a burger is $3.00 and includes one patty and a bun.

Ingredient:	Cheese	Bacon	Pickle	Condiments	Extra patty	Onion
Cost:	$0.50	$1.50	$0.75	$0.75	$1.50	$0.75

Note that the purchase of a single extra patty doubles the cost of cheese, bacon, and onion if they are also purchased. The purchase of two extra patties similarly triples those costs.

1 What is the price of a burger with cheese, onion, and pickle?

A) $2.00 B) $3.50 C) $4.25 D) $5.00

2 What is the difference in price between a burger with cheese and bacon and a burger with cheese, pickle, onion, and condiments?

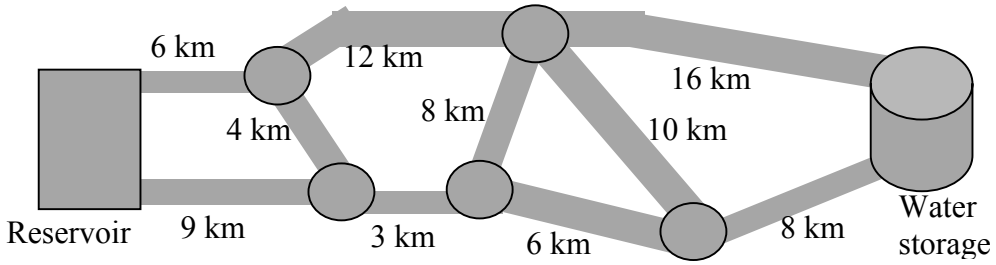
A) $0.00 B) $0.75 C) $1.25 D) $2.25

3 What is the price of a triple (3 total patties) bacon cheeseburger?

A) $10.00 B) $11.00 C) $12.00 D) $13.00

Use the following information to solve problems 4-7.

There exists a complex water flow system that services Tai-shone's Burger Joint, as below (side view, not necessarily to scale):



Water can only travel from left to right within the system.

4 What is the shortest path through the system in km?

A) 23 B) 26 C) 34 D) 36

5 What is the longest possible path through the system in km?

A) 38 B) 39 C) 58 D) Infinity

6 How many possible paths are there through the system?

A) 2 B) 4 C) 8 D) Infinity

7 What is the maximum number of joints in the system (circles in the diagram) that can be blocked (not allow water through) and still allow water to travel through the system from the reservoir to water storage?

A) 0 B) 2 C) 3 D) 4

Use the following information to answer problems 8-10.

In order to better serve customers, management at the Tai-shone Burger Joint decides to record the number of each kind of burger sold and the number of customers buying it over one week. The most popular burgers can then be declared "specialties" and sold for a greater price. The table below reflects the data they gathered for the four most popular combinations.

Burger	Number sold	Number of customers
Base with cheese and condiments (BCN)	48	39
Base with cheese, bacon, onion, pickle, and condiments (BPCAON)	42	22
Base with extra patty, cheese, bacon, and onion (BPCAO)	38	23
Base with everything (B)	32	12

In parentheses are abbreviations used in the following problems for brevity.

8 Which of the above burgers appeals to the greatest number of customers?

A) BCN B) BPCAON C) BPCN D) BPCAO

9 The best candidates for "specialties" status are the burgers with greatest and least ratio between number sold and number of customers. What is the sum of the number of customers for those two burgers?

A) 51 B) 53 C) 74 D) 80

10 On average, to the nearest tenth, how many burgers did each customer purchase?

A) 1.4 B) 1.6 C) 1.7 D) 1.8

"Math is Cool" Championships – 2012-13

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4th Grade – April 19, 2013

Team Contest

1	Miya runs 2 miles in 15 minutes. At this rate, how many miles would Miya run in an hour?
2	Let A = 2013, B = 2301, C = 2031, and D = 2103. Put these four numbers in order of INCREASING size (smallest first). Your answer should be four letters in the correct order.
3	Susanna has a package of flower seeds and seven flowerpots. She plants five seeds in each pot, and has two seeds left over. How many seeds were in the package?
4	The number 8902 has only one odd digit, and the value of this odd digit is 900. Find the sum of the values of all odd digits in 6,473,851.
5	For a playground game, an equilateral triangle with each side $3\frac{1}{2}$ yards long is marked out on the pavement in chalk. What is the number of inches in the perimeter of this triangle?
6	The Daily Grind sells coffee drinks at $3 each and soda drinks at $1.20 each. If Jimmy has $30 and buys 8 coffee drinks, how many soda drinks can he buy with his change?
7	A wook is equal to 3 weeks, and a wik is equal to 4 days. Then "17 weeks and 17 days" can be expressed as "___ wooks and ___ wiks and __ days". What is the smallest possible sum of the three numbers that can fill the blanks if all are whole numbers?
8	In a certain race, each contestant rides either a bicycle or a tricycle. If there are a total of 145 contestants and 300 wheels on their vehicles, how many contestants are riding bicycles?
9	Twice my number is 17 more than the result when my number is subtracted from 100. What is my number?
10	The average (mean) of John's three whole-number test scores is 88. If he never scored less than 75 on any test and the highest possible score on any test was 100, find the lowest **median** possible for John's three scores.

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Relay Contest

RELAYS - 5 minutes per relay – 4 problems per relay - 2 relays – 15% of team score

There is no talking during this event and you must always be facing forward. Person #1 will be given an answer sheet and will need to fill out the information at the top. The proctor will hand out a strip of paper to each person containing problem(s). These need to be face down on your desk until it is time for the relay to start. Person #1 will have problem #1 on his/her paper. Person #2 will have problem #1 and #2 printed on his/her paper. Person #3 will have problem #2 and #3 on his/her paper and Person #4 will have problem #3 and #4 on his/her paper. Once the relay begins, everyone may turn over their strip of paper and begin working. You may write on the strip of paper to come up with answers to the problems on your strip of paper. However, when person #1 figures out his/her problem, he/she will record ***ONLY his/her final answer*** *on the answer sheet and pass only the answer sheet back to the person #2. Person #2 has the option of changing Person #1's answer if he/she wants by crossing it out and putting a new answer. Once Person #2 records at least an answer for problem #2 on the answer sheet, he/she passes only the answer sheet behind to Person #3. This continues until person #4 puts an answer on the answer sheet and gives it to the proctor. A correct answer for problem #1, #2 and #3 is worth 1 point each. A correct answer from problem #4 is worth 2 points making each relay worth 5 points. You will see the expression* ***TNYWG*** [Proctor: write this on the board] *which means: "the number you will get". This is where you insert your teammate's answer into the new problem that you have on your paper so you can finish solving it. Once the relay begins, turn over your strip of paper and* ***make sure you have the right person number.*** *Each teammate has the option of changing any answers on the answer sheet when they have it in their possession, but once it is passed back, they will not see the answer sheet again. Remember, no talking and remain facing forward to avoid being disqualified!*

	Practice Relay	Answer
Question 1	What is 3 times 7?	21
Question 2	What is 3 times TNYWG?	63
Question 3	Find the sum of the digits in TNYWG and then add 1.	10
Question 4	What is TNYWG divided by 5?	2
	Relay #1	
Question 1	What is 5+7+9?	21
Question 2	Divide TNYWG by the number of days in a week.	3
Question 3	What is the number of centimeters in TNYWG meters?	300 [cm]
Question 4	What is TNYWG divided by the perimeter of a pentagon with side length 5?	12
	Relay #2	
Question 1	What is the average of the numbers: 10, 11, 13, and 14?	12
Question 2	Multiply TNYWG times the number of quarts in a gallon.	48
Question 3	If TNYWG pieces of candy are divided equally among eleven friends, how many pieces will be leftover?	4 [pieces]
Question 4	What is 125% of TNYWG?	5

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4th Grade – April 19, 2013

COLLEGE KNOWLEDGE BOWL ROUND #1 - SET 1

#	Problem	Answer
1	Jill has seven friends and each gives her four dollars. How many dollars did she receive?	[$] 28
2	What is the positive difference between 742 and 379?	363
3	If I am 54, what is one ninth of my age times one sixth of my age?	54
4	What is 1020 divided by 20?	51
5	How many numbers between 1 and 40 are divisible by both 3 and 5?	2
6	Two elves can make 20 toys in one hour. How many toys can 17 elves make in 3 hours?	510 [toys]
7	Evaluate 26 squared.	676
8	Find the value of 3 raised to the fifth power.	243
9	A rectangle has a width of 5 inches and an area of 35 square inches. In inches, what is its perimeter?	24 [inches]
10	Jack and Jill are getting water. If Jack carries 10 buckets an hour and Jill carries 2 buckets every 15 minutes, after 3 hours how many more buckets has Jack carried?	6

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COLLEGE KNOWLEDGE BOWL ROUND #2 - SET 2

#	Problem	Answer
1	Tyson runs a mile in eight minutes. At this rate, how many miles can he run in fifty-six minutes?	7 [miles]
2	What is the sum of the 5 smallest prime numbers?	28
3	Ten times one hundred times one thousand ends in how many zeroes?	6
4	What is 64 times 37?	2368
5	There are 3 red, 5 blue and 6 green marbles in a bag. As a fraction, what is the probability of randomly drawing a marble that is not blue?	9/14
6	The perimeter of a regular hexagon is 72. What is the perimeter of a square made using 4 of its sides?	48 [un]
7	Sabrina writes 8 questions in 30 minutes. Tyson writes 2 questions in one hour. How many questions can they write together in 3 hours?	54 [questions]
8	The powers of two are 1, 2, 4, 8 and so on. What is the largest power of two that is less than 1000?	512
9	What is 32 squared?	1024
10	The sides of a rectangular box are 3, 5 and 8 feet. In square feet, what is the total area of all faces of the box?	158 [sq ft]

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COLLEGE KNOWLEDGE BOWL ROUND #3 - SET 3

#	Problem	Answer
1	How many sides does an octagon have?	8
2	There are twelve geese. 7 geese lay 5 eggs each. 3 geese lay 7 eggs each. 2 geese lay no eggs. How many eggs were laid in total?	56
3	On one roll of a fair six-sided die and expressed as a fraction, what is the probability of rolling a number greater than four?	1/3
4	What is the next number in the geometric sequence: one, three, nine, twenty-seven?	81
5	What is the sum of the first eight odd counting numbers?	64
6	If 99 red balloons cost $297. How much would 100 red balloons cost?	[$] 300
7	What is the remainder when you divide 1,234 by 8?	2
8	Sabrina is playing cards with Jourdan. Jourdan wins 10% of the time, Sabrina wins 60% of the time and they tie 30% of the time. If they play 40 games, how many times do we expect Sabrina to win?	24 [times]
9	If the sum of two numbers is 211 and their positive difference is 21, what is the smaller of the two numbers?	95
10	How many zeroes are in the product of four squared and five to the fifth power?	4

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COLLEGE KNOWLEDGE BOWL ROUND #4 - SET 4

#	Problem	Answer
1	How many inches are in 9 feet?	108 [inches]
2	How many prime numbers are there less than 15?	6
3	Amy bought a dozen donuts and ate two on the way home. She gave half of what was left to her friend. Her dog ate one and the rest went to her dad. How many did she give to her dad?	4 [donuts]
4	What is the remainder when you divide 43 by 9?	7
5	A triangle has angles 30 and 80. What is the other angle, in degrees?	70 [degrees]
6	There are red and blue marbles in a jar. If the probability of randomly drawing a blue marble is two-fifths and there are twenty marbles total, how many blue marbles are there?	8
7	If a pen costs 50 cents, and a pencil costs 20 cents, how much do 7 pens and 8 pencils cost?	[$] 5.10
8	Ten math team students all shake hands with each other. How many handshakes occur?	45 [handshakes]
9	Biff spent twice as long as Eho on his math homework. The total amount of time they spent on math homework was 2 hours. How many **minutes** did Biff spend on his math homework?	80 [minutes]
10	It rains 140 inches a year in Ketchikan, Alaska. Assuming the same amount of rain falls each month, how many inches of rain falls in the month of September over a three-year period?	35 [inches]

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COLLEGE KNOWLEDGE BOWL ROUND #5 - SET 5

#	Problem	Answer
1	What is the tens digit in the number: four thousand six hundred ninety-two?	9
2	If today is a Wednesday, what day of the week will it be seventeen days from now?	Saturday
3	What does x equal if 4 times x equals 12?	3
4	How many diagonals can be drawn in a pentagon?	5
5	As a fraction, what is the probability of flipping two fair coins and ending up with two heads?	1/4
6	What is the sum of the even numbers between 1 and 11?	30
7	Each side of a square is doubled in length. What is the area of the new square divided by the area of the old square?	4
8	What is the median of 97, 32, 45, 12, 140, 83, and 72?	72
9	What is the next number in the sequence: one, three, six, ten, blank?	15
10	John travels sixty miles at forty miles per hour and sixty more miles at sixty miles per hour, how many minutes did John travel?	150 [minutes]

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COLLEGE KNOWLEDGE BOWL ROUND #6 - SET 6

#	Problem	Answer
1	What is the product of 7 and 13?	91
2	As a fraction, what is the chance of getting a number greater than 3 on a roll of a fair six-sided die, times the chance of getting a head on a single flip of a fair coin?	1/4
3	How many counting numbers less than twenty divide into twenty equally?	5
4	Kelsey makes 8 out of 12 shots that she attempts. If she attempts 36 shots, how many shots would we expect her to make?	24
5	How many corners does a cube have?	8
6	What is the arithmetic average of the numbers 4, 7, 8 and 13?	8
7	In how many ways can I re-arrange the letters in the word M-A-T-H?	24
8	What is the number two times itself four times?	16
9	What is one-half plus one-quarter plus one-eighth?	7/8
10	How many minutes are there between eight-fourteen in the morning and ten-seventeen in the morning?	123 [minutes]

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COLLEGE KNOWLEDGE BOWL ROUND - EXTRA

#	Problem	Answer
1	When I double my favorite number and add three the answer is seven. What is my favorite number?	2
2	What is the total of the numbers: one plus two plus three and so on up to ten?	55
3	A rectangle has a length of ten and a perimeter of thirty, what is its width?	5 [units]
4	If I drive at thirty miles per hour, how many minutes will it take to go twelve miles?	24 [min]
5	What is twenty times forty-four?	880
6	How many zeroes are there at the end of one hundred thousand?	5
7	If I roll a fair six-sided die, what is the probability of rolling an even number?	1/2

First Score (out of 8)

Math is Cool" Championships – 2012-13

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Name_____Team #_____

Room #_____

School Name _____ Proctor Name_____

Mental Math Contest

MENTAL MATH - 30 seconds per question – 25% of team score

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DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	4		
2	64 [units]		
3	16		
4	93 [combinations]		
5	25 [problems]		
6	900		
7	49 [sq inches]		
8	120 [ways]		

First Score

(out of 20)

"Math is Cool" Championships – 2012-13

4th Grade – April 19, 2013

School Name_____Team #_____

Proctor Name_____Room #_____

TEAM MULTIPLE CHOICE - 15 minutes – 10 problems – 20% of team score

This test is the only test where you will be penalized for incorrect responses. You will receive 2 points for a correct letter response, 0 points for leaving it blank and -1 point for an incorrect response. When you are prompted to begin, tear off the colored sheet, pass out a copy of the test to each team member, and begin testing. Since this is a multiple choice test, ONLY a letter response should be listed as an answer on the answer sheet.

DO NOT WRITE IN SHADED REGIONS

Answer		-1, 0 or 2	-1, 0 or 2
1	D		
2	B		
3	C		
4	B		
5	B		
6	C		
7	C		
8	A		
9	A		
10	C		

First Score

(out of 10)

"Math is Cool" Championships – 2012-13

4th Grade – April 19, 2013

School Name_____Team #_____

Proctor Name_____Room #_____

TEAM TEST - 15 minutes – 10 problems – 30% of team score

When you are prompted to begin, tear off the colored sheet and give a copy of the test to each of your team members and begin testing. Each problem is scored as ***1 or 0****. Record all answers on colored answer sheet.*

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	8 [miles]		
2	ACDB		
3	37 [seeds]		
4	73,051		
5	378 [inches]		
6	5 [soda drinks]		
7	10		
8	135 [bicycle riders]		
9	39		
10	82 [points]		

"Math is Cool" Championships -- 2012-13

4th Grade – April 19, 2013

School:_____Team #_____

Proctor: _____ Room #_____

PRACTICE RELAY

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
21	**63**	**10**	**2**
1 or 0	1 or 0	1 or 0	2 or 0

RELAY # 1

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
21	**3**	**300 [cm]**	**12**
1 or 0	1 or 0	1 or 0	2 or 0

RELAY # 2

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
12	**48**	**4 [pieces]**	**5**
1 or 0	1 or 0	1 or 0	2 or 0

Math is Cool" Championships – 2012-13

Sponsored by:

4th Grade – April 19, 2013

Name_____Team #_____ Room #_____

School Name _____ Proctor Name_____

Mental Math Contest

MENTAL MATH - 30 seconds per question – 25% of team score

When it is time to begin, the proctor will read the first question twice. You may not do any writing or talking while arriving at a solution. Once you have a solution, record it on the sheet in front of you. ***You may not change or cross out answers once you have written an answer down. If there are eraser marks, write-overs, or crossed-out answers, they will be marked wrong.*** *Once all students have laid their pencils on the desk, another question will be asked. If a student doesn't lay his/her pencil down, the maximum wait time is 30 seconds after completion of the second reading of the question before another question is asked. You may continue to work on a problem while the next question is being read. The value of each question is a one or zero. Each student will be asked the same eight questions. Individual scores used to determine individual placing will be determined by the sum of the Mental Math score and the Individual Test score for each individual. In addition, the top three Mental Math scores from one team will be totaled and doubled and will contribute to 25% of the team score.*

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1			
2			
3			
4			
5			
6			
7			
8			

First Score

(out of 20)

"Math is Cool" Championships – 2012-13

4th Grade – April 19, 2013

School Name_____Team #_____

Proctor Name_____Room #_____

TEAM MULTIPLE CHOICE - 15 minutes – 10 problems – 20% of team score

This test is the only test where you will be penalized for incorrect responses. You will receive 2 points for a correct letter response, 0 points for leaving it blank and -1 point for an incorrect response. When you are prompted to begin, tear off the colored sheet, pass out a copy of the test to each team member, and begin testing. Since this is a multiple choice test, ONLY a letter response should be listed as an answer on the answer sheet.

DO NOT WRITE IN SHADED REGIONS

	Answer	-1, 0 or 2	-1, 0 or 2
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

First Score

(out of 10)

"Math is Cool" Championships – 2012-13

4th Grade – April 19, 2013

School Name_____Team #_____

Proctor Name_____Room #_____

TEAM TEST - 15 minutes – 10 problems – 30% of team score

When you are prompted to begin, tear off the colored sheet and give a copy of the test to each of your team members and begin testing. Each problem is scored as ***1 or 0****. Record all answers on colored answer sheet.*

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

"Math is Cool" Championships – 2012-13

April 19, 2013

Final Score: 1-15	Final Score: 16-30	Final Score: 31-40
KEY	KEY	KEY

STUDENT NAME: _____ **School Name:** _____

Proctor Name: _____ Team #: _____ Room #: _____

4th Grade Individual Contest – Score Sheet

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	8		
2	3		
3	44		
4	2,164		
5	1/4		
6	Less than		
7	215 [quarters]		
8	75		
9	[$] 1.23		
10	160 [miles]		
11	16 [cups]		
12	48 [inches]		
13	31 [flowers]		
14	1/2 or 2/4		
15	[$] 13.50		
1-15 TOTAL:			

	Answer	1 or 0	1 or 0
16	17		
17	6		
18	10 [apples]		
19	24 [mph]		
20	[$] 56.70		
21	6		
22	48 [sq un]		
23	8 [numbers]		
24	84		
25	90		
26	6 [petals]		
27	8:55		
28	1/4		
29	90 [pieces]		
30	Three-fifths (3/5)		
16-30 TOTAL:			

	Answer	1 or 0	1 or 0
31	[$] 6.25		
32	5 [children]		
33	343 [cu cm]		
34	1/17		
35	57		
36	115 [°]		
37	76 [°]		
38	25		
39	30 [°]		
40	18 [girls]		
31-40 TOTAL:			

4th Grade

"Math is Cool" Championships – 2012-13

April 19, 2013

Final Score: 1-15	Final Score: 16-30	Final Score: 31-40

STUDENT NAME: _____ **School Name:** _____

Proctor Name: _____ Team #: _____ Room #: _____

4th Grade Individual Contest – Score Sheet

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
1-15 TOTAL:			

	Answer	1 or 0	1 or 0
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
16-30 TOTAL:			

	Answer	1 or 0	1 or 0
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
31-40 TOTAL:			

4th Grade