"Math is Cool" Championships – 2011-12

Sponsored by:

4th Grade – April 20, 2012

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.*

"Math is Cool" Championships – 2011-12

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4th Grade – April 20, 2012

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	Find the sum of 19 and 13.
2	What is the perimeter in centimeters of a regular pentagon with a side length of six centimeters?
3	Answer as a fraction. What is the probability of rolling an even number with a fair six-sided die?
4	I have 21 cough drops. How many cough drops should I give to each of seven people so that each one has an equal number?
5	Find the product 5 times 5 times 5.
6	How many dimes are equal in value to 16 quarters?
7	What is the remainder when the product of 7 and 15 is divided by 3?
8	A square has area 8 square inches. What is the area of a hexagon in square inches if one-sixth of the area of that hexagon is equal to one-half the area of the square?

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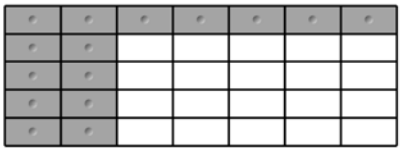
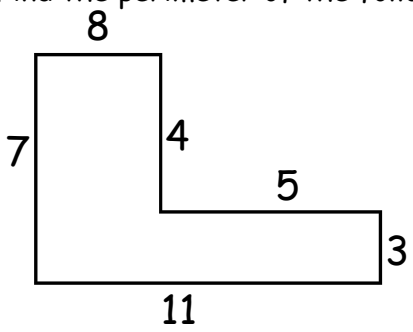
Individual Contest

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.

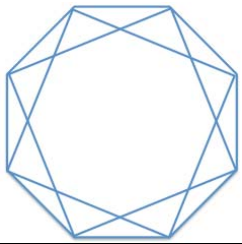
Record all answers on the colored cover sheet.

	Questions 1-30: 2 points each
1	Find the next number in this addition pattern: 4, 11, 18, 25, ___.
2	What digit is in the hundred-thousands place of the following number: 42,133,700
3	Which of the three symbols >, <, or = should go between these two numbers? 4,444 ___ 555.55
4	Find the sum of 8,675,309 and 90,123.
5	How many nickels are needed to have $3.85?
6	What is the remainder when 485 is divided by 7?
7	Adam is holding 15 balloons. Tealah is holding 12 balloons. How many more balloons is Adam holding than Tealah?
8	Let: A = 15, B = 2, C = 8. Put the values A, B, C in order from smallest to largest. Your answer should be three letters in the correct order.
9	What fraction of the figure is shaded? 

10	Write the letter that is next to the circle where Gregg made his first mistake in the question below. A B 3 15 4573 - 812 3661 C D E F
11	Find the perimeter of the following shape: 
12	What do you need to add to 11 to get 17?
13	 Soccer practice starts at the time indicated on the clock above and lasts for 95 minutes. What time does soccer practice get over? (No AM or PM required)
14	Joe needs to buy a calculator that costs $20.00 for math camp. He has already saved $8.00. How many more dollars does he need to save in order to buy the calculator?
15	Jonas has 7 more than two-dozen eggs. How many eggs does Jonas have?
16	What is the median of the following set of data: {12, 42, 64, 17, 55, 22, 35}
17	Stacey likes to bend her licorice sticks into shapes before eating them. When she bends the licorice stick into a square, it has an area of 169 cm^2. What is the length of the licorice stick, in cm?
18	If $A = \frac{4}{5}$ and $B = \frac{3}{4}$, evaluate: $A - B$.
19	The Universal Office Supply Company ships individual boxes of tape that are 3 in. long, 3 in. wide, and 2 in. high into larger cubical boxes that have a side length of 12 in. How many of these smaller boxes can fit into one larger box?
20	How many different combinations of nickels, dimes, and/or quarters result in a sum of 35 cents? [You don't have to use each type of coin in every combination.]

21	How many minutes are in a week?
22	The product of three consecutive counting numbers is 720. What is the largest of these three integers? [Consecutive means right after one another.]
23	How many diagonals can be drawn in a regular octagon?
24	In six years, I will be twice as old as I was three years ago. How many years old am I now?
25	Find the measure of a certain angle if its measure is twice the measure of its complement. Express your answer in degrees.
26	Arty is the best basketball free thrower at the Math is Cool School. If he makes 88% of his shots, how many baskets do you expect him to make out of 550 tries?
27	What is the product of the first five odd counting numbers?
28	The sum of the interior angles of a polygon is 720°. How many sides does the polygon have?
29	A pair of dice, each with faces marked 1 through 6, are rolled. What is the probability of a sum greater than 10 showing on the upturned faces?
30	Sally has six different colored porcelain dolls lined up next to each other in a circle. How many different ways can she rearrange them? Hint: There is no first or last, just which doll is on the left and right.

Challenge Questions: 3 points each	
31	Determine the smallest counting number that satisfies the following conditions: - Divide 3 into this number and you get a remainder of 2 - Divide 5 into this number and you get a remainder of 1 - Divide 7 into this number and you get a remainder of 6
32	64 tennis players are registered for the Championships at Wimbledon. The tournament uses a single elimination process, meaning that when a player loses, he or she is out of the tournament. If each match has one person against one other, what is the minimum number of matches that need to be played before a sole winner is determined?
33	Convert 2.6 to a fraction in reduced form.
34	Suppose 9 identical ink jet printers can simultaneously produce a total of 18 stacks of gloss paper in 18 minutes. How many minutes will it take 12 printers of the same type to produce 24 stacks of gloss paper?

35	Barbara earns $0.10 for each local newspaper she delivers and she delivers papers two days a week. Her older sister earns $0.25 for delivering each Sunday newspaper. Both Barbara and her sister deliver papers to the same number of houses and together earn a total of $13.95 per week. How many papers does Barbara's older sister deliver each week?
36	How many triangles are in this figure? 
37	In a recent car accident, Mark was required to pay the shop $2352 to fix the damage to his Mercedes. However, Mark can only make payments of $48 per week. How many weeks will it take Mark to pay the shop back?
38	On the third Tuesday of every month, Allan likes to play the claw crane at the arcade as he always wins something. The claw crane contains a teddy bear, a porcelain doll, and a pair of fuzzy dice. The probability of winning the teddy bear is $\frac{3}{8}$. The chance of winning the doll is twice as likely as winning the dice. What is probability he wins the dice?
39	The ratio of red to blue to yellow ladybugs in Sherwood Forest is 6:5:1. While out ladybug spotting, Krista finds 732 ladybugs in the same ratio, each with 6 legs. Of the total number of legs that the ladybugs have, how many legs belong to blue ladybugs?
40	In a regular pentagon, ABCDE, diagonals are drawn from A to C and A to D. What is the measure of angle CAD in degrees?

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Team Multiple Choice Contest

Problems 1-4 refer to the following:

This table describes the reptile section of the zoo in Paradile City.

Reptile	How many At zoo.	Food requirement per animal (cups per week)
Snake	3	1
Lizard	8	2
Turtle	6	6

1 How many reptiles does the zoo contain?

A) 9 B) 17 C) 19 D) 26

2 How many cups of food does the turtle population consume in one week?

A) 3 B) 16 C) 36 D) 55

3 One four-week period, the turtle population is twice as hungry as usual, although the lizard population is half as hungry as usual. How many <u>extra</u> cups of food must the zoo purchase for those four weeks?

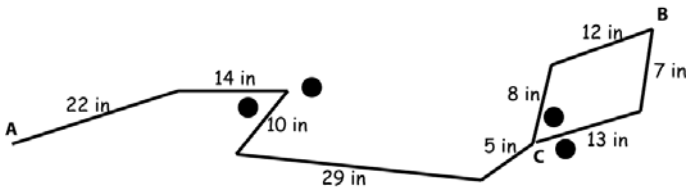
A) 56 B) 108 C) 112 D) 128

4 If the zoo purchases 3 more snakes and 2 more lizards, how many more cups of food per week will it need (using the requirements in the above table)?

A) 7 B) 10 C) 12 D) 22

Problems 5-7 refer to the following:

The following diagram shows the paths a hungry turtle and an unlucky fish take through a pond, starting at point A and ending at point B. At point C the turtle goes to the left side to avoid a small gap between two rocks.



5 How many inches does the turtle travel from point A to point B?

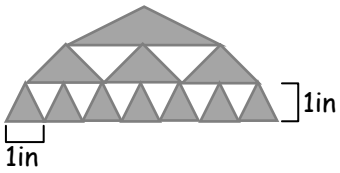
A) 90 B) 100 C) 110 D) 120

6 Upon reaching point C, what percent of the total distance has the fish traveled?

A) 40 B) 50 C) 75 D) 80

7 The fish has a speed of 4 inches per second, and the turtle has a speed of 5 inches per second. Given that the turtle caught the fish at point B, how much of a head start must the fish have had in seconds?

A) 0 B) 3 C) 5 D) 10

	Problems 8-10 refer to the following: Every triangle in the figure has the same height, and every triangle in the same row has the same base. 
8	Find the length of the base of the uppermost triangle in inches. A) 3 B) 4 C) 5 D) 6
9	Find the sum of the area of one of each size of shaded triangle in square inches. A) $\frac{7}{2}$ B) 4 C) $\frac{9}{2}$ D) 6
10	Find the entire enclosed non-shaded area in square inches. A) 5 B) 8 C) $\frac{17}{2}$ D) $\frac{27}{2}$

"Math is Cool" Championships – 2011-12

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4th Grade – April 20, 2012

Team Contest

1	Eho has 2 gallons of lemonade. How many quarts of lemonade does Eho have?
2	Biff needs to mail 7 letters. Each letter requires 4 stamps and each stamp costs $0.45. What is the cost, in dollars, of the stamps that he needs?
3	2012 marbles are divided into 12 containers making sure that each container has as many marbles as possible but keeping the same number in each container. How many marbles will be left over?
4	Devon takes 30 minutes to pull 28 weeds. Eva pulls 18 weeds in 20 minutes. How many weeds do Eva and Devon pull per hour if they work together at these rates?
5	Three identical rectangles, each 7 inches by 6 inches, are put together with their sides lined up to form a new, larger rectangle. What is the greatest possible perimeter (in inches) of this new rectangle?
6	The Humane Society has some dogs, 21 cats, 4 parakeets, and 1 goldfish available for adoption as pets. If these pets have 136 feet in all (and all pets have the normal number of feet for their species), how many dogs are available for adoption?
7	Let A = 341462.779, B = 2386.5372, and C = 7362.446. Round A to the nearest thousand, B to the nearest hundredth, and C to the nearest hundred, then find the sum of these three rounded values. If your answer is not a whole number, give it as a decimal.
8	My neighbor's dog was let out 8 times yesterday, and barked a total of 116 times. The second time she was let outside, and every time after that, she gave three more barks than the previous time she was let out. How many barks did she give the first time she was let out?
9	A cube that is 4 inches on a side is painted blue. It is then cut up into 64, 1x1x1 inch smaller cubes. How many of these cubes are not painted on any of their sides?
10	At a math contest, the four members of a team each took an individual test with 20 questions. The median score (number of correct problems) for the four team members was 14. Exactly one team member scored more than 15, but everybody scored a whole-number score of at least 10. What is the lowest possible average (mean) score for the team? If your answer is not a whole number, give it as a decimal.

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4th Grade – April 20, 2012

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 2 times 2?	4
Question 2	What is TNYWG times 2?	8
Question 3	What is TNYWG times itself?	64
Question 4	Simplify: $\frac{TNYWG}{4}$	16
	Relay #1	
Question 1	What is $7 \times 1 \times 8$?	56
Question 2	Take TNYWG and divide it by the number of even numbers between 1 and 9.	14
Question 3	Evaluate $\frac{TNYWG}{20} + \frac{3}{10}$	1
Question 4	Compute: $TNYWG \times (14 - 5) - 2$	7
	Relay #2	
Question 1	How many days are in the month of September?	30 [days]
Question 2	What is TNYWG divided by the number of different ways the letters in the word "SIX" can be arranged?	5
Question 3	What is the area of a rectangle with a length of TNYWG and a width of four?	20 [sq un]
Question 4	Bertha has TNYWG muffins, but sells a dozen of them. How many muffins does she have left?	8 [muffins]

"Math is Cool" Championships – 1010-11

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COLLEGE KNOWLEDGE BOWL ROUND #1 – SET 1

#	Problem	Answer
1	If four more than three times my number is sixteen, what is my number?	4
2	How many prime numbers are between 20 and 30?	2 [numbers]
3	What is the probability of rolling a fair six-sided die and getting an even number?	1/2 or 3/6
4	There are 6 marbles in every bag. How many bags does George need if he wants to give three marbles to each of nine people?	5 [bags]
5	What is four times four times four times four?	256
6	If Anna flips three coins, what is the probability she will get three tails?	1/8
7	Every day Maggie burns off seven pounds during the daytime, then gains four pounds back during the nighttime. How many days will it take until Maggie has lost 20 pounds?	6 [days]
8	What is the eleventh number in the arithmetic sequence three, seven, eleven, fifteen and so on?	43
9	What is the median of the following set of numbers: two, four, seven, two, five, nine, three, nine, eight?	5
10	Pigs and chickens are in a barn. If there are 15 heads and 46 legs, how may chickens are in the barn?	7 [chickens]

"Math is Cool" Championships – 1010-11

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COLLEGE KNOWLEDGE BOWL ROUND #2 - SET 2

#	Problem	Answer
1	If two sides of a rectangle are length 8 inches and 4 inches, what is its perimeter in inches?	24 [inches]
2	What is the positive difference between 258 and 422?	164
3	What is five thirteenths plus six thirteenths?	11/13
4	All sides of a triangle are whole number lengths. It includes sides of length 6 inches and 9 inches. What is the smallest possible whole number value of the third side in inches?	4 [inches]
5	What is the sum of the first 5 prime numbers?	28
6	If 13 more than 4 times my number is 57, what is my number?	11
7	What is 24 plus 56 minus 13?	67
8	Joe multiplied four hundred sixty by twenty. What does he then have to add to get a total of ten thousand?	800
9	Ben has twice as many dollars as Amy. Will has three times as many dollars as Amy. If Ben has 8 dollars, what is the total number of dollars Amy and Will have?	16 [dollars]
10	Mary is painting the faces of a cube with a side length of 5 inches. How many square inches in total will she paint?	150 [sq in]

"Math is Cool" Championships – 1010-11

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COLLEGE KNOWLEDGE BOWL ROUND #3 - SET 3

#	Problem	Answer
1	What is three times eight divided by six?	4
2	If today is Friday, what day will it be twenty days from now?	Thursday
3	What is one-half of one-third of twelve?	2
4	If you have 6 dimes, 5 quarters, 3 nickels and 34 pennies, how many dollars and cents do you have?	2 dollars and 34 cents
5	Five times my number plus 3 equals 28. What is my number?	5
6	Convert 40 percent to a reduced fraction.	2/5
7	Tally has 64 pieces of candy. If she wants to share evenly with three other friends and herself, how many pieces of candy will each person get?	16 [pieces]
8	How many whole numbers are there between 24 and 82 that have the digit 3 in them?	14 [numbers]
9	What is the mean, that is, the average, of the even numbers between one and eleven?	6
10	At 2:00 pm, Sally starts making brownies. Each hour, she makes two-dozen brownies and eats 9 brownies. How many brownies are left just before she starts baking at 6:00 pm?	60 [brownies]

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COLLEGE KNOWLEDGE BOWL ROUND #4 - SET 4

#	Problem	Answer
1	What is 5 times 4 times 3 times 2?	120
2	How many seconds are in 2 hours?	7,200 [sec]
3	Kim has pennies, nickels, and dimes in her pocket that add up to 67 cents. If she has 3 dimes and 12 pennies, and the rest are nickels, how many nickels does she have?	5 [nickels]
4	A show is open 12 hours a day for 5 days. If 3 people show up every hour, how many people total came to the show?	180 [people]
5	My number is halfway between 35 and 61. What is my number?	48
6	When 157 is divided by 6, what is the remainder?	1
7	The Bell family has four sheep they collect wool from every year. If each sheep gives 11 pounds of wool each year, how many years will it take to collect 200 pounds of wool?	5 [years]
8	What is a polygon that has twice as many sides as a rectangle called?	Octagon
9	How many counting numbers less than 100 are multiples of both 6 and 7?	2 [numbers]
10	A palindrome is a number that reads the same backwards as it does forward. For example, one hundred twenty one is a palindrome. A positive four-digit palindrome is added to 370. What is the smallest possible sum that could result?	1371

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COLLEGE KNOWLEDGE BOWL ROUND #5 - SET 5

#	Problem	Answer
1	What is 3 times 9 times 11?	297
2	A pumpkin weighs 4 pounds 7 ounces. How many ounces does the pumpkin weigh?	71 [ounces]
3	Thomas needs to catch a train at 8:00 am. It takes him 15 minutes to drive to the station, 10 minutes to check in, and 5 minutes to board the train. What time does he need to leave?	7:30 AM
4	One cookie costs 50 cents. How much do 8 cookies cost in dollars?	4 [dollars]
5	What is the product of 14 and 150?	2100
6	Jack has 10 dollars. He buys a candy for 1 dollar and 15 cents and a drink for 2 dollars and 10 cents. How many dollars and cents does Jack have left?	6 dollars and 75 cents.
7	The digital product of a number is the product of its digits. What is the digital product of three hundred eighty four?	96
8	A stack of paper is 200 sheets and a full box holds 10 stacks. If one and a half stacks are missing from a full box, how many sheets of paper are left in the box?	1700 [sheets]
9	How many hours are in the months of June and July combined?	1464 [hours]
10	My age today, is three less than twice what my age was five years ago. How old am I today?	13 [years]

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COLLEGE KNOWLEDGE BOWL ROUND #6 - SET 6

#	Problem	Answer
1	What is one eighth of 216?	27
2	What is the positive difference between 613 and 224?	389
3	How many zeros are in the number 10 billion?	10 [zeros]
4	What is the area, in square inches, of a square with side length 14 inches?	196 [sq in]
5	There are 4 piles of sticks. Each pile has 10 sticks. Harry takes 2 sticks from one pile, 1 from another and 5 from a third. The remaining sticks are evenly distributed into 4 new piles. How many sticks are in each pile?	8 [sticks]
6	What is twenty-nine times thirty-one?	899
7	What is the sum of the number of faces and the number of corners on a cube?	14
8	What is the remainder when 534 is divided by 8?	6
9	Which of the following numbers of cents can be made with exactly three U.S. coins? 8 cents, 10 cents, 21 cents, or 18 cents.	21 [cents]
10	Greg's home is 50 miles from work. Yesterday, he drove one-fourth of the way from home to work, and then remembered he forgot something at home. He drove back home, and then to work. How many total miles did Greg drive to work yesterday?	75 [miles]

"Math is Cool" Championships – 1010-11

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COLLEGE KNOWLEDGE BOWL ROUND - EXTRA

#	Problem	Answer
1	The zoo in Smallville only has 4 elephants, 5 ostriches and 2 wolves. How many total legs are there in their zoo?	34 [legs]
2	What is 360 divided by 24?	15
3	A rectangle has a width of 5 and length 3. What is the positive difference between its area and perimeter?	1
4	A strawberry plant grows 24 strawberries each year. If I have 5 strawberry plants, how many years will it take to get at least 500 strawberries?	5 [years]
5	Angie bought two items where the average of their prices was 14 dollars. If one item was 9 dollars, how much was the other item in dollars?	19 [dollars]
6	Bill is 5 feet 3 inches tall. How many inches tall is Bill?	63 [inches]

Final Score:

KEY

First Score

(out of 8)

"Math is Cool" Championships – 2011-12

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4th Grade – April 20, 2012

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	32		
2	30 [cm]		
3	1/2 or 3/6		
4	3 [cough drops]		
5	125		
6	40 [dimes]		
7	0		
8	24 [in^2]		

"Math is Cool" Championships – 2011-12

4th Grade – April 20, 2012

School Name_____Team #_____

Proctor Name_____Room #_____

Final Score:

KEY

First Score

(out of 20)

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	B		
2	C		
3	C		
4	A		
5	B		
6	D		
7	C		
8	B		
9	A		
10	A		

"Math is Cool" Championships – 2011-12

4th Grade – April 20, 2012

School Name_____Team #_____

Proctor Name_____Room #_____

Final Score:

KEY

First Score

(out of 10)

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 [quarts]		
2	[$] 12.60		
3	8 [marbles]		
4	110 [weeds]		
5	54 [inches]		
6	11 [dogs]		
7	350,786.54		
8	4 [barks]		
9	8 [cubes]		
10	13.5 [points]		

"Math is Cool" Championships -- 2011-12

KEY

4th Grade – April 20, 2012

School:_____Team #_____

Proctor: _____ Room #_____

PRACTICE RELAY

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
4	**8**	**64**	**16**
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
56	**14**	**1**	**7**
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
30 [days]	**5**	**20 [sq units]**	**8 [muffins]**
1 or 0	1 or 0	1 or 0	2 or 0

Final Score:

First Score
(out of 8)

"Math is Cool" Championships – 2011-12

Sponsored by:

4th Grade – April 20, 2012

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			

"Math is Cool" Championships – 2011-12

4th Grade – April 20, 2012

School Name_____Team #_____

Proctor Name_____Room #_____

Final Score:

First Score
(out of 20)

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			

"Math is Cool" Championships – 2011-12

4th Grade – April 20, 2012

School Name_____Team #_____

Proctor Name_____Room #_____

Final Score:

First Score
(out of 10)

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 – 2011-12

April 20, 2012

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	32		
2	1		
3	>		
4	8,765,432		
5	77 [nickels]		
6	2		
7	3 [balloons]		
8	B, C, A [order matters]		
9	15/35 or 3/7		
10	D		
11	38		
12	6		
13	5:00		
14	12 [dollars]		
15	31 [eggs]		
1-15 TOTAL:			

	Answer	1 or 0	1 or 0
16	35		
17	52 [cm]		
18	1/20		
19	96 [boxes]		
20	6 [comb]		
21	10080 [min]		
22	10		
23	20 [diagonals]		
24	12 [years old]		
25	60[°]		
26	484 [baskets]		
27	945		
28	6 [sides]		
29	3/36 or 1/12		
30	120 [ways]		
16-30 TOTAL:			

	Answer	1 or 0	1 or 0
31	41		
32	63 [matches]		
33	13/5		
34	18 [minutes]		
35	31 [Papers/week]		
36	40 [Triangles]		
37	49 [weeks]		
38	5/24		
39	1830 [legs]		
40	36[°]		
31-40 TOTAL:			

4th Grade

"Math is Cool" Championships – 2011-12

April 20, 2012

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