"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010
Individual Contest

GENERAL INSTRUCTIONS applying to all tests:

- *Good sportsmanship is expected throughout the competition by all involved. Bad sportsmanship may result in disqualification.*
- *Calculators or any other aids may not be used on any portion of this contest.*
- *Unless stated otherwise:*
  - *For problems dealing with money, a decimal answer should be given.*
  - *Express all rational, non-integer answers as reduced common fractions.*
- *For fifth and sixth grade, all fractions and ratios must be reduced.*
- *Counting or natural numbers refer to the numbers 1,2,3,4 and so on and do NOT include 0.*
- *Units are not necessary unless it is a problem that deals with time and, in that case, am or pm is needed. 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 filled out at the top of the sheet.*
- *Tests will be scored as a 0 if answers are not recorded correctly on the answer sheets.*
- *Blank answer sheets and answer sheets with no name will also be scored as a 0.*

INDIVIDUAL TEST - *35 minutes*

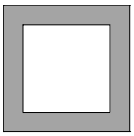
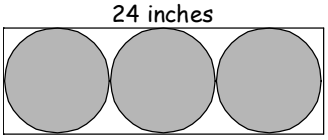
When you are prompted to begin, tear off the colored sheet and begin testing. Make sure your name and school are recorded on the answer sheet. Each problem is scored as a 1 or 0. Record your answers on the score sheet. No talking during the test. You will be given a 5 minute warning.

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010
Individual Contest

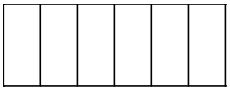
Record all answers on the colored cover sheet.

1	What is the sum of the digits of the year 2010?
2	A line of symmetry divides a figure into two equal halves, each half the reflection of the other. How many lines of symmetry does an equilateral triangle have?
3	When 7 is added to 18, the sum is how much less than 30?
4	Karen has a jar with 2 red marbles, 4 blue marbles, and 5 yellow marbles. She takes out one marble at random. As a fraction, what is the probability that this marble is yellow?
5	What time will it be 50 minutes after 6:25 PM?
6	Two congruent squares (identical in size and shape) are lined up exactly side to side and stuck together without overlapping. How many sides does the resulting figure have?
7	Find the value of $1+2+3+5+6$.
8	On the planet Threa, the year is divided into 12 months, each with exactly 30 days. How many days are in a year on the planet Threa?
9	I am thinking of three consecutive counting numbers between 100 and 200. ("Consecutive" means in a row, without skipping any.) Is their sum even or odd? If there is not enough information to be sure, answer "can't tell".
10	If three pencils cost 51¢ in all and each pencil costs the same amount, how many cents would two pencils cost?
11	What is the average (mean) of 10, 18, 7, and 9?
12	How many prime numbers are greater than 10 and less than 30?
13	If twice my number is equal to half my number, then what is my number?
14	Each chocolate chip cookie costs 75¢ and each vanilla cookie costs 50¢. Milly buys 3 chocolate chip cookies and 5 vanilla cookies and pays with a $10 bill. How much change (in dollars) should she get back?
15	Find the value of $3.09+0.034-1.26$, and give your answer as a decimal.
16	Rita has a piece of red rope candy that is 72 cm long. She marks 8 different places on the rope, then cuts through the rope at each of these places. On average, what is the length (in cm) of each resulting piece?
17	How many multiples of 5 are between 29 and 72?
18	March 3rd of a certain year is on a Thursday. On what day of the week will May 10th of that year fall? (Give the name of the day, not its number.)

19	Adam has 10 coins which have a total value of 78 cents. How many dimes could Adam have? If there is more than one possible answer, give all of them.
20	The fraction $\frac{1}{A}$ is less than $\frac{2}{5}$. What is the smallest whole number that A could be?
21	Four rectangular wooden pieces, each measuring 1 cm wide by 9 cm long, are arranged with no overlap to form a square picture frame, as shown (not to scale). What is the area, in square centimeters, of the largest picture that can fit completely within this frame? 
22	How much greater is the value of $5 \times 5 \times 5$ than the value of $5 + 5 + 5$?
23	The sum of the degree measures of the three angles of any triangle is exactly half the sum of the degree measures of the four angles of a rectangle. Two of the angles of a certain triangle have the same degree measure, which is 15°. What is the degree measure of the third angle of this triangle?
24	Find the value of $4(3+x)-(7+x)$ if $x=3$.
25	Water is trickling from a faucet at a rate of 2 mL per minute. If Betty holds an empty glass under the faucet, how many mL of water will she collect in 750 seconds?
26	This month is May. What month will it be 2010 months from now? Give the name of the month, not a number.
27	At Bert's Burger Barn, you can choose from white, whole wheat, or sesame buns, and from beef, chicken, or veggie patties. If a burger consists of one type of bun and either one patty or two patties of the same type, how many different burgers can you order?
28	Patrick and Patsy are jogging in the same direction along the same straight track. Patrick has a head start of 36 miles and jogs at 4 miles per hour. Patsy jogs at 7 miles per hour. Assuming they maintain these speeds without stopping, how many hours will it take Patsy to catch up with Patrick? 
29	In the figure at right, the three circles are the same size, and each touches its neighboring circle at a single point. The rectangle encloses them exactly. If the length of the rectangle is 24 inches as shown, find the number of square inches in the area of the rectangle.
30	In a "snow to shore" relay race, a canoeist covered her 12-mile portion of the route at an average speed of 5 miles per hour, and then passed the baton to a bicyclist who rode his 18 miles at 15 miles per hour. How many hours did it take them to cover these 30 miles? If your answer is not a whole number of hours, express it as a mixed number.

Challenge Questions

31	What is my number if 17 more than my number is the same as 71 minus twice my number?
32	Two different counting numbers have the same remainder when divided by 7. (This remainder is not zero.) One of the numbers is a multiple of 6, and both numbers are less than 50. What is the largest possible sum of the two numbers?

33	Sharon had exactly enough sugar to bake 8 dozen cookies. But she decided to bake a cake first, using $1\frac{1}{2}$ cups of sugar from this supply. Afterwards, she had just exactly enough sugar left to bake 60 cookies. If each cookie uses the same amount of sugar, how many cups of sugar did Sharon have before baking the cake?
34	Stacey has 1000 sticks. She groups them into bundles of 6, and when she gets 6 such bundles, she ties them together to form a bindle. When she gets 6 bindles, she ties them together to form a bandle. When she has finished, Stacey has A bandles, I bindles that are not in bandles, U bundles that are not in bindles, and S sticks that are not in bundles. Write these four values in order (AIUS).
35	A token exchange machine takes an exact number of tokens of one color and returns an exact number of tokens of another color. Five purple tokens can be exchanged for 3 green tokens, or 4 purple tokens can be exchanged for 3 yellow tokens. Five green tokens can be exchanged for 2 red tokens. In each case, the reverse exchange is also possible (eg, 3 yellow tokens can be exchanged for 4 purple tokens). If I start with 9 red tokens and get as many yellow tokens as possible, how many tokens in all will I have when I finish?
36	A small parking lot has spaces for 6 cars in a row, as shown. Three of the spaces, chosen at random, have cars parked in them. As a reduced (simplified) fraction, find the probability that the empty spaces are all next to each other. 
37	Sarah had a set of 100 square tiles, all the same size. She has now lost N of those tiles. It is now no longer possible for Sarah to lay out a set of squares made from her tiles so that all squares are different sizes and no tiles are left over. What is the smallest possible value of N?
38	When a certain counting number is divided by 9, the sum of the remainder and the quotient is 13. What is the smallest possible value of this number? (Remember that the divisor must be larger than the remainder.)
39	Lou bought five pieces of fruit. Each piece of fruit was either an apple, weighing $\frac{1}{2}$ pound, or an orange, weighing $\frac{3}{4}$ pound. The total weight of the fruit was a whole number of pounds. If apples cost 80¢ a pound and oranges cost $1.10 a pound, how much did Lou's fruit cost, as a decimal number of dollars?
40	Jan built a cube from unit cubes (each 1 by 1 by 1 unit). Ken took this cube apart, and used the unit cubes to build a rectangular solid that was the same height as Jan's cube but 2 units greater in width and 2 units less in length. Ken had 24 unit cubes left over. How many unit cubes did Ken use to build his figure?

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Team Multiple Choice Contest

An earthquake has struck the Monterey Bay Aquarium and some of the facilities have been damaged. Before the earthquake, the Aquarium collected the following data on the animals in its Masters of the Sea exhibit. "Wake" time is the time at which the animals become active; "sleep" time is the time they become inactive.

	Number	Average Weight (lb)	"Wake" Time (AM)	"Sleep" Time (PM)	Swimming Speed (ft/sec)
Orcas	3	500	5:00	7:30	12
Sharks	20	200	4:30	11:30	25
Stingrays	35	30	11:00	10:00	8
Angelfish	50	20	7:00	8:30	15
Octopi	100	15	2:30	2:30	10
Sea Stars	300	1	3:00	5:00	0.05

1	What is the difference in the number of inactive ("sleeping") hours per day between the animal that is active the shortest time and the one that is active the longest time? A) 12 B) 9.5 C) 8 D) 9 E) Answer Not Given
2	At 6:20 AM on a day before the earthquake occurred, how many of the animals in the Masters of the Sea exhibit were active? A) 458 B) 408 C) 508 D) 423 E) Answer Not Given
3	After the earthquake, a fifth of the stingrays from the Masters of the Sea exhibit escaped into the sea through a hole in their enclosure. How many total pounds would the escaped stingrays be expected to weigh? A) 150 B) 1150 C) 210 D) 135 E) Answer Not Given
4	The old starfish tank, whose top had a perimeter of 8 yards, was damaged by the quake. A new tank has arrived to replace the old one. The perimeter of the top of the new tank is three times as long as that of the old tank. What is the perimeter, in inches, of the top of the new tank? A) 288 B) 96 C) 24 D) 192 E) Answer Not Given
5	An orca is swimming laps back and forth along a 600-foot-long tank. (One lap is defined as swimming the length of the tank twice.) If the orca began swimming when it woke up in the morning and has now swum 126 laps without stopping, what time is it now? A) 7:45 AM B) 8:30 AM C) 12:00 PM D) 6:45 AM E) Answer Not Given
6	Sharks swim X times as fast as octopi. What is X? A) 5 B) 25 C) 1.5 D) $2\frac{1}{2}$ E) Answer Not Given
7	The shark tank was damaged by the quake, and some of the sharks were moved temporarily into the angelfish tank. Two days after the sharks were moved, a marine biologist discovered that only 22 angelfish remained in their tank. If each shark eats 7 angelfish per day, how many sharks were moved into the angelfish tank? (No angelfish escaped or died from other causes.) A) 1 B) 2 C) 3 D) 4 E) Answer Not Given

Restated:
An earthquake has struck the Monterey Bay Aquarium and some of the facilities have been damaged. Before the earthquake, the Aquarium collected the following data on the animals in its Masters of the Sea exhibit. "Wake" time is the time at which the animals become active; "sleep" time is the time they become inactive.

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Stingrays	35	30	11:00	10:00	8
Angelfish	50	20	7:00	8:30	15
Octopi	100	15	2:30	2:30	10
Sea Stars	300	1	3:00	5:00	0.05

8	Before the quake, what was the average weight, in pounds (rounded to the nearest whole pound), of all animals in the Aquarium's Masters of the Sea exhibit? A) 128 B) 18 C) 2 D) 12 E) Answer Not Given
9	After the quake, all of the sea stars, <u>remaining</u> angelfish, and <u>remaining</u> stingrays from the Masters of the Sea exhibit were moved to a temporary home at another aquarium so that repairs could be made to their tanks. (NOTE: See problem 3 and problem 7.) All these animals were combined into a single container to transport them. If an animal is chosen at random from this container, what is the probability that it is not a stingray? A) $\frac{23}{25}$ B) $\frac{10}{11}$ C) $\frac{21}{23}$ D) $\frac{28}{350}$ E) Answer Not Given

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Team Contest

1	What is the smallest whole number that could be added to 73 to produce a sum greater than 201?
2	Wendy lost a dollar but then found an amount equal to half the amount of money she had before losing her dollar. She now has $6.50. How much money (in dollars) did Wendy have originally?
3	Point C on a number line is halfway between point A and point B. Point D is halfway between point B and point C. Point D is 54 units from point A. How many units is point C from point B?
4	Suman drives 48 miles in 2 hours. At this speed, how many miles would Suman drive in 6 hours?
5	If the table at right continues with the pattern shown, what letter will head the column in which the number 2010 will appear?
6	Amazingly, 3-toed sloths have 3 toes per foot, and 2-toed sloths have 2 toes per foot. Each sloth has 4 feet. A group of 3-toed sloths and 2-toed sloths has 76 toes altogether. Find the largest number of sloths there could be in the group.
7	A rectangle is cut in half to form 2 smaller rectangles. The perimeter of each of the smaller rectangles is 12 inches, and all of their sides are a whole number of inches. Find the sum of all numbers that could possibly be the perimeter (in inches) of the original rectangle.
8	Dotty puts a decimal point in each of the following two addends (without putting in extra zeros) such that S is greater than 10 but less than 100. Find the sum of all possible values of S that could result. $984 + 695 = S$
9	Three of the following values are equal. Which one is different? $\frac{6}{8}$ $\frac{3}{4}$ $\frac{20}{25}$ $\frac{75}{100}$
10	I am thinking of a 3-digit whole number with all its digits different. Exactly one of its digits is in the number of inches in a yard. Exactly one of its digits is in the number of hours in 2/3 of a day. Exactly one of its digits is in the number of years in 25 decades. Exactly one of its digits is in the number of ounces in 4 pounds. What is the smallest my number could be?

A	B	C	D	E	F
	1	2	3	4	5
6	7	8			

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010
Relay Contest

RELAYS - 5 minutes per relay

There is no talking during this event and you must always be facing forward. Person #1 will be given an answer sheet(s) and will need to fill out the top. The proctor will hand out a strip of paper to each person. These need to be face down on your desk until it is time for the relay to start. 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 your answer. However, when person #1 figures out his/her problem, he/she will record ***just his/her final answer*** *on the answer sheet and pass only the answer sheet back to the person behind. This continues until person #4 puts an answer on the answer sheet and gives it to the proctor. A correct answer from person #1, #2 and #3 is worth 1 point each. A correct answer from person #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 put your teammate's answer that they pass back to you, and then you should be able to solve your question. Once the relay begins, turn over your strip of paper and* ***make sure you have the right person number.*** *Remember, no talking and remain facing forward to avoid being disqualified!*

	Relay #1	Answer
Person 1	What is the probability that a single card drawn at random from a standard deck will be a diamond? Answer as a fraction.	1/4 or 13/52
Person 2	Multiply TNYWG by the number of months in a year, then add this answer to the number of days in a week.	10
Person 3	When TNYWG twos are multiplied together, what is the product?	1024
Person 4	If Sally has TNYWG dollars, then spends (720 ÷ 3) of them, how many dollars would she have left?	784 [dollars]
	Relay #2	Answer
Person 1	There is a troop of 20 monkeys in the forest. Eight of these monkeys like bananas, five like mangos, and two like both (they love banana-mango smoothies). How many monkeys like neither bananas nor mangos?	9 [monkeys]
Person 2	A rectangle has perimeter 18 units and the length is twice the width. Find the number of units in the length and subtract it from TNYWG.	3 [units]
Person 3	A pie is cut in half and each of these pieces is quartered. If each resulting piece is finally divided into TNYWG equal slices, what simplified fraction of the original pie does each final slice contain?	1/24
Person 4	If five bings equal one bang and 3 bangs equal TNYWG bongs, how many bings are equal to one bong?	360 [bings]

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Final Score: KEY

School Name_____Team #_____

Proctor Name_____Room #_____ Division: ____

Mental Math Contest

MENTAL MATH - 30 seconds per question

PERSON 1 NAME:		**1 or 0**
1.1	What is the distance on the number line from sixteen to thirty-seven?	21 [units]
1.2	I have sixty-six buttons, divided equally among three cups. If I remove half the buttons from the third cup and add them to the first cup, how many buttons will be in the first cup?	33 [buttons]
1.3	What fraction of the prime numbers less than ten are odd?	3/4
1.4	What is two thousand ten plus two hundred ten plus ten?	2230
PERSON 2 NAME:		
2.1	What is the sum of one hundred thirty-eight and one hundred seventeen?	255
2.2	A regular octagon and an equilateral triangle each have side lengths of eight inches. What is the number of inches difference in length between the perimeters of these two figures?	40 [in]
2.3	How many centimeters are in two meters?	200 [cm]
2.4	I have a package of a dozen candies, of which seven are chocolate, three are caramel, and the rest are peppermint. If I take out one candy at random, what is the probability that it will be peppermint? Give your answer as a fraction.	2/12 or 1/6
PERSON 3 NAME:		
3.1	If I made five dozen cookies and then ate one-fourth of them, how many cookies were left?	45 [cookies]
3.2	How many days are in two weeks?	14 [days]
3.3	The area of a certain rectangle is forty square centimeters. The length of one side is eight centimeters. What is the number of centimeters in the perimeter of the rectangle?	26 [cm]
3.4	Subtract eleven from two million.	1,999,989
PERSON 4 NAME:		
4.1	One pint is what fraction of two gallons?	1/16 [or equiv fraction]
4.2	Mark leaves school at three-ten PM and walks home. He arrives home at thirty-three minutes after five o'clock that afternoon. How many minutes did it take Mark to walk home?	143 [minutes]
4.3	Anna has eighty-five apples. She gives two apples to each of her seven friends. How many apples does Anna have left?	71 [apples]
4.4	What is the remainder when seventy-seven is divided by five?	2

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 1A

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	What is the sum of the five smallest EVEN counting numbers?	30
2	I have five coins worth thirty cents in all. If I take out one of these coins at random, what is the probability that it will be a nickel? Answer as a fraction.	4/5
3	Tom draws a square with side length ten inches. Suzy draws a square with side length seven inches. In square inches, how much larger is the area of Tom's square than of Suzy's square?	51 [sq inches]
4	What is the largest counting number that will divide into both eighteen and ninety-nine with no remainder in either case?	9
5	Find the product of twenty-three times seven.	161
6	If today is Tuesday, what day of the week will it be eleven days from yesterday?	Friday
7	I stack six of my blocks to make a tower one FOOT tall. All my blocks are cubes of the same size. If I add three more blocks to the top of my tower, how many INCHES tall will my new tower be?	18 [inches]
	Extra Problem – Only if Needed	
8	A group of crows is called a "murder" of crows. A pine tree holds a murder of twenty crows. How many crows'-feet are in the pine tree?	40 [feet]

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 2A

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	Tim is facing south. If he turns right one hundred eighty degrees, what direction will he be facing?	north
2	What is the simplified fraction equal to the sum of one-eighth and five-eighths?	3/4
3	Angela has eight roses, nine lilies, and twelve daisies. A bouquet consists of one rose, one lily, and one daisy. After Angela makes as many bouquets as she can, how many flowers will be left over?	5 [flowers]
4	If three times my number is seven, what is twelve times my number?	28
5	If Little Debbie spent fifteen dollars on cupcakes that cost seventy-five cents each, how many cupcakes did she buy?	20 [cupcakes]
6	On a certain ranch, there are ten cabins. Each cabin has three ceiling fans, and each fan has five blades. How many fan blades are in the cabins?	150 [blades]
7	When the number two thousand ten is written many times in a row with no spaces, what digit will be in the 99th position?	1
	Extra Problem – Only if Needed	
8	What is the remainder when forty-six is divided by seventeen?	12

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 3A

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	What is the largest multiple of five less than four hundred forty-four?	440
2	When I add twenty-one, four, and sixteen, I get twenty-five more than my number. What is my number?	16
3	How many zeros does it take to write the number thirty thousand?	4 [zeros]
4	What is the diameter, in inches, of a circle with radius thirty-two inches?	64 [inches]
5	Amy and Betsy rake leaves at the same speed. Working together, it would take them from noon until 3 PM to rake the leaves from their lawn. Carol rakes leaves at half the speed of Amy. How many hours would it take Carol to rake the leaves from their lawn if she did all the work herself?	12 [hours]
6	What is the largest possible number of Tuesdays in the month of October?	5 [Tuesdays]
7	Biff owes Eho seven dollars. Biff does some yard work and earns thirteen dollars. After he pays Eho and buys a book costing three dollars, how many dollars will Biff have left?	3 [dollars]
	Extra Problem – Only if Needed	
8	How many ways can I arrange the letters of the word FIRE (spelled F-I-R-E) if E must be the first letter?	6 [ways]

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 1B

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	How many more days are there in ten weeks than in the two longest months of the year combined?	8 [days]
2	Sammy has three uncles. The sum of their ages five years ago was sixty-seven years. What is the sum of their ages now, in years?	82 [years]
3	How many sides does a hexagon have?	6 [sides]
4	When fifty-eight is divided by seven, what is the sum of the quotient and the remainder?	10
5	The length of each side of a rectangle is a counting number of inches. The total length of three sides of the rectangle is six inches. What is the area of this rectangle, in square inches?	4 [square inches]
6	Four times my number is eighteen. What is ten times my number?	45
7	Eleven passengers and one driver were on a bus. At the first stop, two people got off and five people got on. At the second stop, five people got off and four people got on. How many people in all were on the bus after the second stop, including the driver?	14 [people]
	Extra Problem – Only if Needed	
8	Subtracting eighty-five from my number gives the same value as the sum of eighty and fourteen. What is my number?	179

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 2B

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	Express ninety percent as a reduced or simplified fraction.	9/10
2	When I add all the digits of my seven-digit telephone number, the sum is eight. None of the digits is zero. How many different telephone numbers could I have?	7
3	Biff and Eho get the same amount of spending money each week. This week, Biff got three quarters and a nickel. Eho got two dimes, and then got the rest of his spending money in nickels. How many nickels did Eho get?	12 [nickels]
4	Janet played soccer every day for a week, then took a break. If the first day she played soccer was June seventeenth, what was the date of the last day she played soccer before her break?	[June] 23rd
5	How many two-digit counting numbers are there whose first digit is two times the second digit?	4 [numbers]
6	It is harvest season and Farmer John must pack apples into crates, which hold one-hundred twenty apples each. How many crates does Farmer John need if he has one thousand five hundred apples to pack?	13 [crates]
7	Find the median of the following set of values: six, fourteen, nine, three, eight.	8
	Extra Problem – Only if Needed	
8	When two thousand ten is multiplied by itself, what digit will be in the ones place of the product?	0

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Set 3B

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	The quotient of five hundred divided by twenty-five is equal to the product of five and what number?	4
2	Ronnie takes all the red cards from a standard deck, then adds them to a complete standard deck. What fraction of the cards in the new enlarged deck are red?	52/78 [or] 2/3
3	Determine the perimeter in INCHES of a rectangle whose side lengths measure seven FEET and thirteen FEET.	480 [inches]
4	I have ten identical cubes. I use them to make a larger cube. How many cubes will I have left over?	2 [cubes]
5	The first three numbers of a certain addition pattern are fourteen, twenty-one, and twenty-eight. What is the fifth number of this pattern?	42
6	Biff writes an eight-page story and numbers the pages one through eight. Eho erases one of the page numbers. The sum of the page numbers remaining is thirty. What page number did Eho erase?	[page] 6
7	What digit is in the tenth's place of the decimal number three and twenty-five hundredths?	2
	Extra Problem – Only if Needed	
8	Alice correctly adds six plus seven. Betty correctly subtracts six from nineteen. What is Betty's result minus Alice's result?	0

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

Final Score:
KEY

First Score

School Name_____Team #_____

Proctor Name_____Room #_____

STUDENT NAME_____Division: _____

Individual Contest – Score Sheet

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	3		
2	3 [lines]		
3	5		
4	5/11		
5	7:15 PM		
6	4 [sides]		
7	17		
8	360 [days]		
9	can't tell		
10	34 [¢]		
11	11		
12	6 [primes]		
13	0		
14	[$] 5.25		
15	1.864		
16	8 [cm]		
17	9 [multiples]		
18	Tuesday [or Tues]		
19	0, 4 [dimes] [either order]		
20	3		

	Answer	1 or 0	1 or 0
21	64 [cm^2]		
22	110		
23	150 [°]		
24	14		
25	25 [mL]		
26	November [or Nov.]		
27	18 [burgers]		
28	12 [hours]		
29	192 [in^2]		
30	$3\frac{3}{5}$ [hr]		
31	18		
32	89		
33	4 [cups]		
34	4344		
35	26 [tokens]		
36	1/5		
37	4 [tiles]		
38	53		
39	[$] 2.85		
40	192 [cubes]		

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

School Name_____Team #_____

Proctor Name_____Room #_____Division: _____

Final Score:
KEY

First Score

(out of 18)

Team Multiple Choice Contest – Score Sheet

TEAM MULTIPLE CHOICE - 15 minutes

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.

Correct responses are worth 2 points, incorrect responses are worth -1 point and no response is 0 points.

DO NOT WRITE IN SHADED REGIONS

Answer		-1, 0 or 2	-1, 0 or 2
1	C		
2	D		
3	C		
4	E [864]		
5	B		
6	D		
7	B		
8	B		
9	A		

"Math is Cool" Masters – 2009-10

4th Grade – May 22, 2010

School Name_____Team #_____

Proctor Name_____Room #_____Div: _____

Final Score:
KEY

First Score

(out of 20)

Team Contest – Score Sheet

TEAM TEST - 15 minutes

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 a 2 or 0.

DO NOT WRITE IN SHADED REGIONS

	Answer	2 or 0	2 or 0
1	129		
2	[$] 5 or 5.00		
3	36 [units]		
4	144 [miles]		
5	A		
6	9 [sloths]		
7	90 [inches]		
8	276.244		
9	20/25		
10	267		

"Math is Cool" Masters -- 2009-10

KEY

4th Grade – May 22, 2010

School:_____Team #_____

Proctor: _____ Room #_____Div _____

RELAY # 1

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
$\frac{1}{4}$ or 13/52	**10**	**1024**	**784 [dollars]**
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
9 [monkeys]	**3 [units]**	**1/24**	**360 [bings]**
1 or 0	1 or 0	1 or 0	2 or 0