"Math is Cool" Championships – 2009-10

Sponsored by:

5th Grade – March 5, 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.

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Individual Contest

Record all answers on the colored cover sheet.

1	What is the remainder when 864 is divided by 9?
2	Evaluate: $\frac{5}{7} - \frac{1}{3}$ Write answer as a reduced fraction.
3	What is the greatest common factor of 21, 14 and 28
4	True or False: A trapezoid is also a rectangle?
5	Find the area of a right triangle, in square units, with sides of length 10, 24 and 26.
6	How many lines of symmetry does a square have?
7	Evaluate: (3 X N) – 11 when N = 5
8	What is the next prime number greater than 25?
9	What is the mean of all composite numbers between 15 and 21? (Not including 15 and 21)
10	What is the perimeter, in units, of a rectangle with sides of length 33 and 7?
11	What is the radius, in inches, of a circle with a diameter of 46 inches?
12	What time is it 4 hours and 32 minutes before 1:55 PM?
13	Adam's sock drawer contains 11 red socks, 15 green socks, 12 purple and 5 black socks. How many socks would he need to draw out without looking to ensure a matching pair of black socks?
14	The measure of two angles in a triangle are 27° and 43°. Is the triangle obtuse, acute, right, or can't be determined?
15	Both Marcy and Suzanne start counting at zero. Marcy counts by 9 and Suzanne by 7. If zero is the first number they both say that is the same, what is the third number they both will say?
16	On a hike trip, 4 math team members can eat 3 pounds of beef jerky each day. If the hike trip last 5 days and 20 math team members go on the trip, how much beef jerky, in pounds, should they take?

17	At a free-throw shooting contest it is determined that Geoffrey makes 7 out of 9 shots. If Geoffrey shoots 63 times, how many shots would you expect him to make?
18	Adam wants to buy his girlfriend Ashley a calculator for their one year anniversary. He only has quarters to pay for the calculator. The calculator cost $124.75. How many quarters will it take him to pay for the calculator?
19	Mr. Tosch's dog, Plato, got lost at the math retreat and missed his ride home, so he walked home. The total trip was 172 miles. On the first day Plato walked 25 miles, the next day 24, the next 23, etc. How many days did it take Plato to walk all the way home?
20	This year the scores on Corin's Science tests have been 90%, 98% and 97%. What score does she need to get on the last test in order to have an average score of 95%?
21	A snail is in a well 39 feet deep. Each day the snail crawls 15 feet up the side of the well. Each night while it sleeps, it slides down the side of the well 10 feet. How many days will it take for the snail to get out of the well?
22	Express .2222… as a common fraction in reduced form.
23	On Math Island, the town of Linear requires bicycles to have licenses to be ridden on Pythagoras Street. The license plates are 3 numbers followed by one letter. Zero and the letter "O" are not allowed to be used. Repeating of numbers is okay. How many different license plates can be made?
24	Corin has a lot of single shoes. The average shoe size among them is $5\frac{1}{2}$. The sum of all the shoe sizes is 99. How many single shoes does she have?
25	How many perfect squares are there between 17 and 122?
26	How many different triangles with whole number side lengths with a perimeter of 30 have one leg 12 units long?
27	What is the maximum number of acute interior angles a convex pentagon can have?
28	What is the units digit when 3^{24} is expressed as a counting number?
29	Water increases in volume by 4% when frozen. I pour 325 cubic centimeters (cc) of water into a container that holds 500 cc. I then freeze this water. What is the empty volume remaining in the container, in cubic centimeters?
30	Margot went on a hike last weekend. She hiked for as many miles as $\frac{1}{3}$ of her hike plus an additional 3.8 miles. As a decimal, how many miles did Margot hike?

Challenge Questions – 5th Grade

31	Biff had a $1 bill, a $2 bill, a $5 bill, a $10 bill, a $20 bill, and a $50 bill. Biff had 6 jars where he kept his money, with exactly one bill in each jar. Eho found five of these jars and took all the money from them. He kept these bills, but put a $2 bill in each of 3 of these jars and a $10 bill in each of the other 2 jars from which he had taken money. Now Eho has $42 more than he had to start with. How many dollars are in the jar Eho did not find?
32	All except one of the following statements can be paired with another of the statements that contradicts it (that is, the two statements cannot both be true). Which statement is <u>not</u> contradicted by another one of the statements? (Assume that a flurb is an animal.) Answer with a letter. (A) At least one animal that isn't a flurb is not green. (B) Some flurbs are green. (C) All animals that aren't flurbs are green. (D) All green animals are flurbs. E) Some flurbs are not green. (F) At least one animal that isn't a flurb is green. (G) All flurbs are green.
33	Chess is a 2-person game. At a chess tournament, each competitor played a game of chess with each other competitor once. The total number of chess games was odd. If there were at least 9 but no more than 16 competitors at the tournament, how many different numbers of competitors are possible?
34	A monthly calendar is laid out as usual with 7 columns labeled Sunday through Saturday, and with as many rows as needed for that month. The sum of the numbers in a single column of the calendar for a certain month is <u>even</u>. What is the largest that sum could be?
35	On an analog clock, what is the measure of the smallest angle, in degrees, formed between the two hands at 8:20?
36	A rectangular block has faces with areas 48 ft^2, 72 ft^2, and 96 ft^2. What is the volume, in ft^3, of the block?
37	Thirty matheletes each competed in a scavenger hunt. Thirty percent of the people each found seventy percent of the items, and seventy percent of the people each found thirty percent of the items. Those who found the least items found six items. How many items were on the list?
38	The mean of three numbers is 6 more than the least of the numbers, and it is 7 less than the greatest number. The median of the three numbers is 8. What is the sum of the three numbers?
39	Tom could build the shed in five days, while Erik could do it in three. How many **hours** would it take the two of them to build the shed, working together?
40	Bin A contains six cubes and two tetrahedrons, while Bin B contains three cubes and four tetrahedrons. If a shape is drawn at random from Bin A and placed in Bin B and then a shape is drawn at random from Bin B, what is the probability that the second shape chosen is a cube?

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Team Multiple Choice Contest

This year at the math retreat, Mrs. Pythagoras brought her two kids and her brother's two kids to the retreat to write questions. At the end of the retreat, the four kids told Mrs. Pythagoras which contest was their favorite. Each preferred a different contest best. There were 4 kids, Jason, Bob, Bill, and Brenda. There were four favorite contests Relay, College Bowl, Team and Individual. From the information below, answer the following 9 questions.

1) Bill, who is not the kid who liked "Relay Contests" best, is the same age as one of his cousins who is male.
2) One of the Gauss brothers, who is not the kid who liked the "College Bowl contests" best, is 20 years old.
3) One kid, who is 21 years old, did not like the "Relay Contests" best.
4) The oldest kid, who is 22 years old, is Jason.
5) Brenda, who is not Bob's cousin, is one year younger than the kid who liked the "Team Contest" best.
6) The kid who liked the "Team Contest" best is not Bob.

1	Which family has two boys at the retreat? A) The Pythagoras family. B) The Gauss family C) Can't be determined
2	What is Brenda's last name? A) Pythagoras B) Gauss C) Can't be determined
3	Who is Brenda's Brother? A) Jason B) Bill C) Bob D) Can't be determined
4	How old is Bill? A) 20 B) 21 C) 22 D) 23 E) Can't be determined
5	How old is Brenda? A) 20 B) 21 C) 22 D) 23 E) Can't be determined
6	Which contest did Jason like the best? A) Individual B) Team C) Relay D) College Bowl E) Can't be determined
7	Who liked the "College Bowl Contests" best? A) Brenda B) Bob C) Bill D) Jason E) Can't be determined
8	Who liked the "Individual Contest" best? A) Brenda B) Bob C) Bill D) Jason E) Can't be determined
9	Who liked the "Relay Contest" best? A) Brenda B) Bob C) Bill D) Jason E) Can't be determined

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Team Contest

1	Joel has $20. He wants to buy some "Math is Cool" hats costing $3.20 each. If the sales tax rate is 10%, what is the largest number of hats Joel can buy?
2	Jamie is inventing a secret code. She wants to make at least 100 different 3-letter code "words", with no restrictions on repetition of letters. How many different letters will Jamie need in her alphabet?
3	Find the sum of A + B + C. A = the percent equal to $\frac{9}{12}$ B = the percent equal to the sum of $\frac{1}{5}+\frac{1}{5}$ C = the percent equal to $4-2\frac{1}{2}$
4	When I multiply my number by 4, I get a whole number bigger than 90 but smaller than 150. When I divide my number by 3, I get a whole number bigger than 4 but less than 10. Find the sum of all the numbers I could be thinking of.
5	The two shortest sides of a right triangle are 7 meters and 6 meters. What is the area of the triangle, in square meters?
6	From a big box of red vines, Alex ate 9, Suman ate 12, Vishnu ate 17, and David ate 34. How many red vines more than the average for these four guys did David eat?
7	In Max's box of Blox, he has 4 cubes for every 3 tetrahedra, and 5 tetrahedra for every 7 dodecahedra. If Max has more than 100 Blox in his box, but only these three shapes, what is the smallest number of dodecahedra he could have?
8	Liz made brownies in a square pan 8 inches on a side. How many more brownies could she get if she cut squares 1 inch on a side than if she cut squares 2 inches on a side?
9	I am thinking of a counting number. The sum of the digits of my number is 25. What is the smallest my number could be?
10	The year number 2010 is divisible by both 5 and 6, but not by 9. What was the most recent year in the past for which this was true?

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 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!*

	Practice Relay	Answer
Person 1	What is 3 times 4 times 5?	60
Person 2	What is TNYWG plus the positive number whose square is 9?	63
Person 3	What is the sum of 39 fives, minus TNYWG?	132
Person 4	What is TNYWG divided by the product of the smallest prime number and the 5th prime number?	6
	Relay #1	Answer
Person 1	Find the number that would go in the blank to make the following true: 5 + 7 + 9 + _____ = 63	42
Person 2	The width of a rectangle is 7 and the area is TNYWG. What is the length of the other side?	6
Person 3	A tree has TNYWG limbs with 15 leaves on each limb. If each leaf has 7 caterpillars on them, how many caterpillars are on the tree?	630
Person 4	TNYWG has three digits. With the 3 digits, form the largest fraction possible. You must have at least one number in the denominator. For example, if you received the number 234, you could create the fraction 23/4. Find the largest fraction possible with TNYWG following the above rules and simplify your answer completely.	20
	Relay #2	Answer
Person 1	What is the tens digit of the product of 72 and 11?	9
Person 2	What is the sum of TNYWG and the mean of 5, 7 and 12?	17
Person 3	What is the next number in the sequence of 9, 13, TNYWG, ____?	21
Person 4	I am thinking of a prime number between 7 and TNYWG. The sum of the digits is 10. What is my number?	19

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 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 product of 4 and 8?	32
1.2	What is the area of a square with side length of 8?	64
1.3	How many odd numbers are there between 20 and 30?	5
1.4	The difference between two numbers is eleven. The smallest number is 9. What is the largest number?	20
PERSON 2 NAME:		
2.1	What is one-third of 45?	15
2.2	What is the area of a triangle with base 5 and height 8?	20
2.3	Brandon gets 5 out of 7 problems correct at math contests. There are 84 problems in the contest for which he is competing. How many problems will he get correct?	60 [problems]
2.4	Two squares of side length 4 cm share a side to form a rectangle. What is the perimeter of the rectangle, in cm?	24 [cm]
PERSON 3 NAME:		
3.1	What is the difference between 28 and 16?	12
3.2	The perimeter of a regular pentagon is 35 inches. What is the length, in inches, of one side of a pentagon?	7 [in]
3.3	Shay has $30. Carnival rides are $4 a ride or $8 for 3 rides. What is the greatest number of rides she purchase for $30?	10 [rides]
3.4	Each of 5 kids are the exact same height of 48 inches. When one stands on the shoulder of another to form a human tower, the total height is 90 inches. If all 5 kids stand on each others shoulders to make a very tall tower, what is the total height of the human tower in inches?	216 [in]
PERSON 4 NAME:		
4.1	What is the sum of the four numbers one, eleven, one-hundred eleven and one thousand one-hundred eleven?	1,234
4.2	How many minutes have elapsed between 11:00 a.m. and 1:30 p.m.?	150 [min]
4.3	The ratio of girls to boys on the math team is 3 to 4. If there are 9 girls on the team, how many boys are on the team?	12 [boys]
4.4	If 5 widgets equal 3 snarflaks and 2 snarflaks equal 3 gizmos, then 27 gizmos equal how many widgets?	30 [widgets]

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set A

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	How many dimes are worth 86 quarters?	215 [dimes]
2	What shape has twice as many sides as a triangle?	Hexagon
3	What is the sum of the reduced numerator and denominator of 16/64?	5
4	If 19 apples can contain 171 worms, how many worms can 2 apples contain?	18 [worms]
5	Mr. Sampson can throw a Frisbee at 20 feet per second. Adam is jogging at 5 feet per second toward Mr. Sampson and is 150 feet away when Mr. Sampson throws a Frisbee in his direction. How many seconds will pass before Adam is hit by the Frisbee?	6 [sec]
6	Tom, the talented, wanted to get 50% of the problems on today's "Individual Test" correct. When Tom got his test back he got two less correct than he wanted. How many problems did he get correct?	18 [problems]
7	If today is Friday, what day of the week was it 100 days ago?	Wednesday
	Extra Problem – Only if Needed	
8	What is 5757 divided by 57?	101

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set A

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	My chicken lays 5 eggs a week. How many weeks will it take for my chicken to lay 15 dozen eggs?	36 [weeks]
2	The perimeter of a square is 48 units. What is the area, in units sqaured?	144 [un^2]
3	What is the next number of this pattern? 1,1,2,3,5,8,13,_?	21
4	Ashley went to the store to buy a pen and some ink. Together, the pen and ink cost $1.10. The pen cost one dollar more than the ink. How much did the pen cost, in dollars?	[$] 1.05
5	The average of 9 numbers is 9. If 8 of these numbers are 1 what is the other number?	73
6	Ian had 50 baseball cards. He gave 3 for 2 in 7 trades and received 5 for 2 in 11 trades. How many cards does Ian have now?	76 [cards]
7	Adam is 3 cm taller than Kyle and 2 cm shorter than Andrea. Andrea is how many centimeters taller than Kyle?	5 [cm]
	Extra Problem – Only if Needed	
8	How many quarters are worth 35 dimes?	14 [quarters]

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set A

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	In the list of numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, how many numbers in the list are exactly 4 more than some other number in the list?	5 [numbers]
2	What is 3.14159 rounded to the nearest thousandth?	3.142
3	What is the largest remainder possible when a number is divided by 2323?	2322
4	The sum of Biff and Eho's ages is currently 27. What will the sum of their ages be in 16 years?	59 [years]
5	When a certain number is divided by 4 the quotient is 30. What is quotient when the same number is divided by 5?	24
6	If four dice are rolled, how many different sums are possible?	21
7	A roller coaster can give 5 people rides in 3 minutes. A Ferris wheel can give 11 people rides in 2 minutes. In 12 minutes, how many more people can ride the Ferris wheel than can ride the roller coaster?	46 [people]
	Extra Problem – Only if Needed	
8	How many nickels are in 15 dollars?	300 [nickels]

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set B

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	Aunt Gayle has a rectangular garden 24 feet by 8 feet and needs to put a fence post every 4 feet. How many fence posts are needed for her garden?	16 [posts]
2	In Bloomsday, each participant drinks an average of 37 cups of water. If there are 2 billion participants, how many cups of water will be consumed?	74 billion [cups]
3	Class went from 1:23 a.m. to 3:21 a.m. How many minutes long is class?	118 [min]
4	I am thinking of two numbers. The first number is 30 less than twice the second number. If the second number is 16, what is the sum of these two numbers?	18
5	A mile long train traveling at one mile per minute comes to a tunnel 2 miles long. How long will it take, in minutes, once the train starts entering the tunnel to be completely out of the tunnel?	3 [min]
6	What is 25 squared?	625
7	Annie shipped t-shirts to Vancouver for the math contest. On Monday she shipped one-third of the t-shirts. On Tuesday she shipped 100 t-shirts and on Wednesday she shipped the rest which was 60 t-shirts. How many t-shirts did she ship?	240 [t-shirts]
	Extra Problem – Only if Needed	
8	Solve for x: $3x + 5 = 26$	7

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set B

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	If 3 blind dogs cost $42.00, how many dollars would one blind dog cost?	[$] 14
2	Random Dog plays tennis for 5 hours and 35 minutes. How many minutes is this total?	335 [min]
3	What is the product of 42 and 48?	2016
4	When rolling 5, 6-sided dice, what is the probability that the 5 numbers appearing on the dice are the same?	1/1296
5	What is the product of 7 x 7 minus the sum of the first 7 odd whole numbers?	0
6	I am thinking of two counting numbers. One number has 2 digits and the other has three digits. The difference between the two numbers is one. What is the sum of the two numbers?	199
7	If a quarter weighs 0.2 ounces, how many quarters will it take to weigh 3.5 pounds?	280 [quarters]
	Extra Problem – Only if Needed	
8	The probability of it raining today is 7/9. What are the odds in favor of it raining today?	7 to 2

"Math is Cool" Championships – 2009-10

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5th Grade – March 5, 2010

Set B

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	Pythagoras Elementary starts school every day at 8:20 a.m. On the day they took a field trip to the space museum, they left school 75 minutes before it usually starts. What time did they leave school for the field trip?	7:05 a.m.
2	What is the remainder when 234 is divided by 3?	0
3	Kyle borrowed $3.00 from Mr. Sampson. The next day he gave him 55 nickels. How many more nickels does he still owe him?	5 [nickels]
4	Pistol the fast calculating pirate, wants to know how many different meals can be created by only choosing one item from each category. One of five appetizers, one of the four salads, one of the 3 entrée's and one of 6 desserts. How many different meals can be created?	360 [different meals]
5	What is the sum of the first 4 prime numbers?	17
6	Two angles in a triangle are 34 degrees and 72 degrees. What is the measure, in degrees, of the third angle	74 [°]
7	How many edges does a cube have?	12 [edges]
	Extra Problem – Only if Needed	
8	How many seconds are in three minutes?	180 [seconds]

"Math is Cool" Championships – 2009-10

5th Grade – March 5, 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	0		
2	8/21		
3	7		
4	False		
5	120 [un^2]		
6	4 [lines]		
7	4		
8	29		
9	18		
10	80 [un]		
11	23 [in]		
12	9:23 AM		
13	40 [socks]		
14	Obtuse		
15	126		
16	75 [pounds]		
17	49 [shots]		
18	499 [quarters]		
19	8 [days]		
20	95 [%]		

	Answer	1 or 0	1 or 0
21	6 [days]		
22	2/9		
23	18225 [plates]		
24	18 [shoes]		
25	7		
26	6 [triangles]		
27	3 [angles]		
28	1		
29	162 [cm^3 or cc]		
30	5.7 [miles]		
31	[$] 20		
32	B		
33	4 [different numbers]		
34	80		
35	130 [°]		
36	576 [ft^3]		
37	20 [items]		
38	27		
39	45 [hours]		
40	15/32		

"Math is Cool" Championships – 2009-10

5th Grade – March 5, 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	B		
2	A		
3	C		
4	A		
5	B		
6	B		
7	A		
8	C		
9	B		

"Math is Cool" Championships – 2009-10

5th Grade – March 5, 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	5 [hats]		
2	5 [letters]		
3	265 [%]		
4	51		
5	21 [m^2]		
6	16 [red vines]		
7	42 [dodecahedra]		
8	48 [brownies]		
9	799		
10	1950		

"Math is Cool" Championships -- 2009-10

KEY

5th Grade – March 5, 2010

School:_____Team #_____

Proctor: _____ Room #_____Div _____

PRACTICE RELAY

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
60	**63**	**132**	**6**
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
42	**6**	**630**	**20**
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	**17**	**21**	**19**
1 or 0	1 or 0	1 or 0	2 or 0