"Math is Cool" Championships – 2014-15
February 27, 2015

Total Correct

KEY

STUDENT NAME: _____

School Name: _____

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

5th Grade Individual Contest – Score Sheet

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	14 [pets]		
2	36 [sheep or wool from 36 sheep]		
3	21 [balloons]		
4	2407		
5	23		
6	Obtuse		
7	4 [years]		
8	3 [pennies]		
9	[$] 13.50		
10	C		
11	43,567.1		
12	12 [parrots]		
13	2 [skateboards]		
14	[$] 20 or 20.00		
15	2 [prime numbers]		
1-15 TOTAL:			

	Answer	1 or 0	1 or 0
16	11 [pages]		
17	7		
18	[$] 2.50		
19	$1\frac{23}{63}$		
20	CAB		
21	10 [miles]		
22	30 [degrees]		
23	A		
24	5th or 5 [step(s)]		
25	12.5		
26	[a=] 17		
27	20 [diagonals]		
28	4 [charms]		
29	80 [minutes]		
30	50 [people]		
16-30 TOTAL:			

	Answer	1 or 0	1 or 0
31	31 [digits]		
32	21 [kittens]		
33	31		
34	3558		
35	75 [°]		
36	1344		
37	6400 [calculators]		
38	3 [pounds]		
39	35 [miles]		
40	198		
31-40 TOTAL:			

5th Grade

"Math is Cool" Championships – 2014-15
February 27, 2015

STUDENT NAME: _____

Proctor Name: _____

School Name: _____

Team #: _____ Room #: _____

5th 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:			

5th Grade

Total Correct

"Math is Cool" Championships – 2014-15

Sponsored by:

February 27, 2015
5th Grade Mental Math Contest

Follow along as your proctor reads these instructions to you. Your Mental Math score sheet is on the back.

GENERAL INSTRUCTIONS applying to all tests:

- *Good sportsmanship is expected throughout the competition by <u>all</u> 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.*

Mental Math – 30 sec per question

8 problems read orally to everyone - Approximately 8% of Individual Score - 25% of team score

*You may NOT be seated next to anyone from your school. If you are MOVE NOW to avoid being disqualified! 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.*

"Math is Cool" Championships – 2014-15
Sponsored by:
5th Grade – February 27, 2015
Mental Math Contest

Mental Math – 30 sec per question

8 problems read orally to everyone - Approximately 8% of Individual Score - 25% of team score

You may NOT be seated next to anyone from your school. If you are MOVE NOW to avoid being disqualified! 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.*

#	Problem
1	If Jill has 6 bananas and Ron has 13 cantaloupes, how many pieces of fruit do they have together?
2	What is the perimeter of an octagon with all the sides of length 4 centimeters?
3	If a butterfly travels 12 feet a minute, how many minutes will it take the butterfly to travel 72 feet?
4	What is one-third plus one-sixth? Give your answer as a reduced fraction.
5	How many possible outcomes are there from rolling two fair nine-sided dice?
6	A fry cook can grill eight hamburgers in 10 minutes. How many hamburgers can he grill in one hour?
7	All the books in a certain library are numbered only with counting numbers, and are numbered one to five hundred. Millie decides to check out books numbered thirty-three through forty-seven. How many books did she check out?
8	Eho has a watch that gains 2 minutes each hour. He sets his watch to the correct time at 4:44 a.m. What time does his watch show, when the correct time is 3:14 p.m. on the same day?

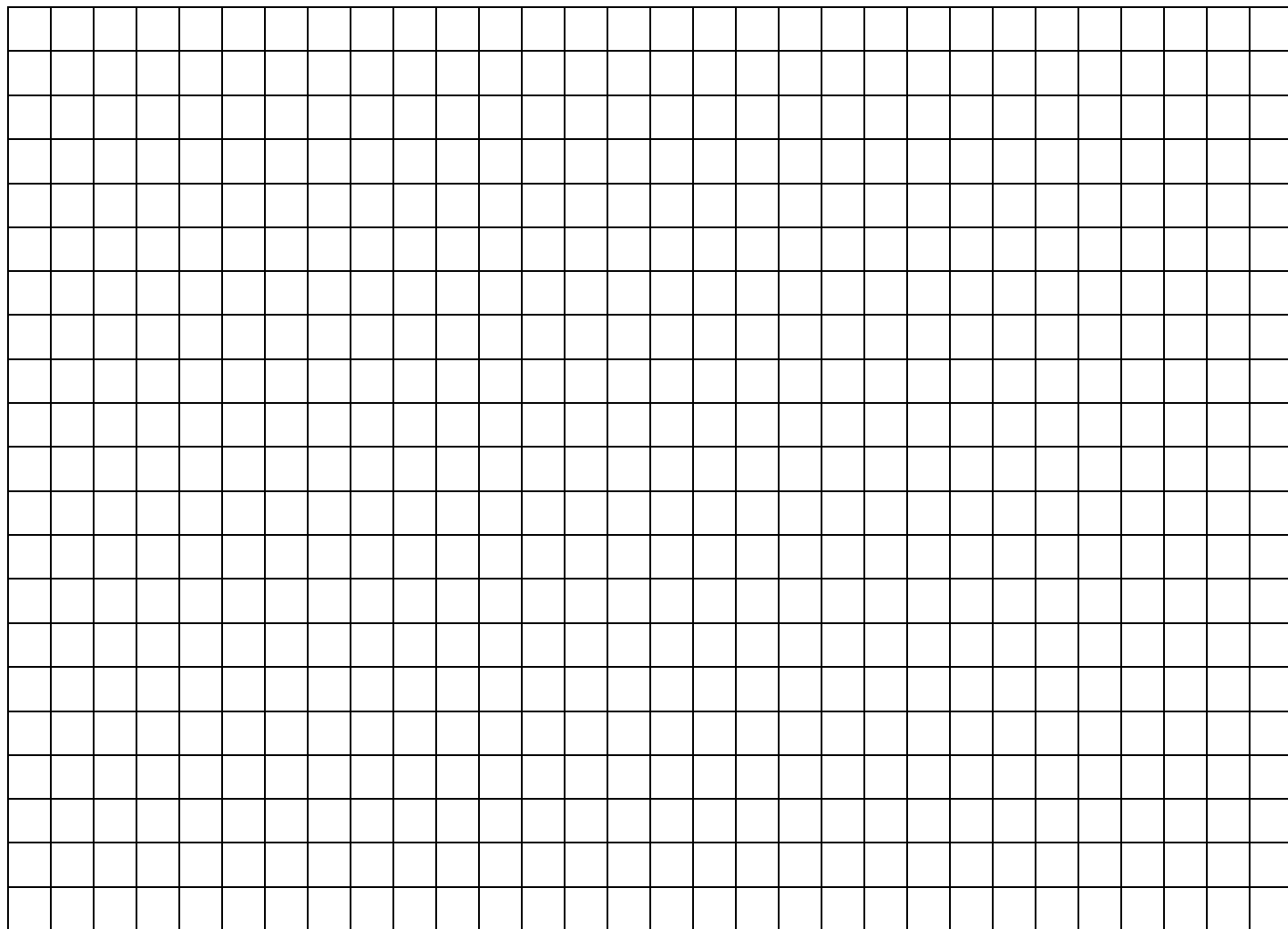# "Math is Cool" Championships – 2014-15

Sponsored by:

February 27, 2015

Individual Contest – 5th Grade

Tear this cover sheet and scratch paper off and fill out the top of the colored answer sheet prior to the start of the test. The graph below is for your use, if needed.

INDIVIDUAL TEST - 35 minutes

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.
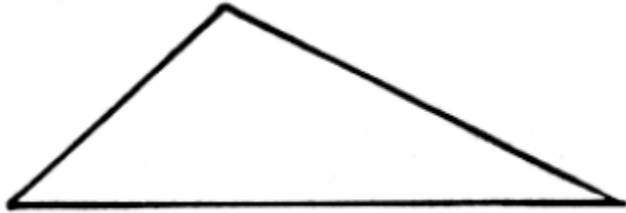
Record all answers on the colored cover sheet.

	Questions 1-30: 2 points each
1	Nellie asked each of her four friends, "How many pets does your family have?" Gary said his family has 2 pets; Gilligan said his family has 5 pets; Ginger said her family has 4 pets; and Katie said her family has 3 pets. How many total pets do her four friends have together?
2	It takes the wool from 3 sheep to make one coat. The wool from how many sheep is needed to make 12 coats?
3	A circus needs to equally distribute 315 balloons to 15 clowns. How many balloons will each clown receive?
4	What is the product of 83 and 29?
5	Find the value of 8N + 7, when N = 2.
6	Is the triangle acute, right, or obtuse?
7	Robert was 12 years old in 1993 while Bill was 14 years old in 1991. What will the difference of their ages be in 2016?
8	Abby has $43.28 in her piggy bank. What is the minimum number of pennies Abby could have?
9	If 12 burritos cost $18.00, how many dollars would 9 burritos cost?
10	Which mathematical "sentence" is false? Give the letter of the false "sentence." (A) $48.98 - $16.25 > $32.71 (B) $51.30 + $20.99 < $.99 + $81.65 (C) $55.37 – $20.37 = $ 3.32 + 31.67 (D) $16.00 > $16.99 - $1.00
11	Round 43,567.12543 to the nearest tenths place.
12	Krista has 44 parrots while Sydney has 20 parrots. How many parrots would Krista need to give to Sydney so they each have the same number of parrots?
13	Mike has $100 and wants to purchase as many skateboards as he can. The cost of each skateboard is $34. How many skateboards will he be able to buy?

14	Marcy went to the pet store to purchase a toy and some dog food for her new puppy. She spent twice as much money on the dog food as she did the toy and paid a total of $60. How much, in dollars, did the toy cost?
15	How many different positive prime counting numbers will divide into 18 with no remainder?
16	Joe just finished reading pages 5 through 15 of his math book. How many pages did he read?
17	What is the average of the following set of data? 3, 11, 4, 15, 6, 2, 8
18	Zach and Joel each take $5.00 to the store to buy snacks. They each spend $3.75. How much money do they now have together?
19	Find the sum of the following two fractions: $\frac{1}{7} + \frac{11}{9}$ Express your answer as a mixed number.
20	Let A = 1.1, B = 8/7, and C = 23/22. Put these fractions in order of increasing size (smallest first). Your answer should consist of 3 letters in the correct order.
21	Bill drives to work every day on the same road with no traffic lights or stop signs. Driving at 30 miles per hour, it takes him 5 minutes longer to get to work than driving at 40 mph. How many miles does he drive each day to work?
22	A triangle has interior angles of x, 2x, and 3x. What is the value of x?
23	A line segment contains three points: A, B, and C. Point C is 33 units from point B; point A is 14 units from point B; and point C is 19 units from point A. Which of the three points could not be an endpoint?
24	Sally is standing 4 feet from the classroom door. Each step she takes covers half the remaining distance to the door. After which step will Sally be closer than 2 inches to the door?
25	What is 50% of 50% of 50? Answer as a decimal.
26	Find the value of "a" if a – b = b – 3 a – b = 7
27	How many diagonals can be drawn in a regular octagon?
28	At the local arcade, Mary is trading toys. If 2 charms are worth 3 bouncy balls, and 2 bouncy balls are worth 3 marbles; how many charms can she get for her 9 marbles?
29	Tina the llama lives in a perfectly square pasture and can run at a speed of 12 miles per hour. If the area of her pasture is 4 miles^2, and she starts running at 2:00, how many minutes later will it be when Tina has run around the perimeter of her pasture, twice?
30	Jurassic Park houses 625 dinosaurs. The square root of all of the dinosaurs escape and scare the kitchen staff. If each dinosaur scares two staff people, how many people got scared?

Challenge Questions: 3 points each

31	How many digits does 2^{100} have?
32	One animal shelter houses 46 total cats. Each kitten needs one bowl of food daily, while an adult cat needs 2 bowls daily. The shelter goes through 71 bowls of food daily. How many kittens are there?
33	A flock of birds stops to rest at a tree. One way the birds could perch on the limbs is: 4 birds on each limb, but with one limb of 5 birds. Another way they could perch on the limbs is: 5 birds on each limb and one limb with no birds on it. What is the sum of the values of the number of birds that are in the flock and the number of limbs on the tree?
34	Sally divided a counting number between 3000 and 4000 by another positive counting number and got a quotient of 711 and a remainder of 3. What number between 3000 and 4000 did Sally use?
35	An isosceles triangle has one angle of measure 35°. What is the largest possible positive difference, in degrees, of the other two angles?
36	A rectangle has a diagonal length of 10 units, where all side lengths are counting numbers. What is the product of the values of the area and perimeter of the rectangle?
37	A math teacher heard that each calculator has 1/100 of an ounce of gold in it and that gold is worth $1200 per ounce. The teacher decides to collect calculators during his career, so that during his retirement he could recycle the calculators and sell the gold. How many calculators would he need to collect in order to save $76,800 worth of gold?
38	A bakery produces two sizes of loaves of bread: a 1 pound loaf and a giant 7 pound loaf. If the bakery produces twice as many 1 pound loaves as 7 pound loaves each day, what is the average size, in pounds, of a loaf of bread produced at the bakery?
39	A bicyclist rode from a town up over a mountain to another town. The road has no flat spots. The bicyclists can ride uphill at 12 miles per hour and downhill at 30 miles per hour. The trip over took 130 minutes and the trip back took 115 minutes. How far apart, in miles, are the two towns?
40	A certain type of 3 digit number has the sum of its digits equal to the product of its digits. What is the positive difference between the largest and smallest such numbers?

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5th Grade – February 27, 2015
Team Multiple Choice Contest

Use the following information for problems 1-4 Holly has recently opened up a savings account with a new bank. Every week, she gets a fixed amount of money added to her account. After 6 weeks, she has $70.07 dollars in her account, and a month later she has $74.99. (Assume each month has 4 weeks.)	
1	How much money is added to her account per week? A) $1.23 B) $1.32 C) $1.97 D) $1.79 E) Answer not given.
2	How much money will be in her bank account after 11 weeks? A) $74.98 B) $75.00 C) $75.01 D) $75.02 E) Answer not given.
3	How much money was initially in her bank account before the first addition to it? A) $62.12 B) $61.99 C) $62.69 D) $63.19 E) Answer not given.
4	Holly opened her account on the first of January. Assuming every month has 4 weeks, what month will it be when she has over $100 in her account? A) February B) December C) September D) August E) Answer not given.

Use the following information for problems 5-7
Botanist Samson is growing patches of certain flowers. He has a patch of tulips, geraniums, and roses that require different amounts of water each day.

Type of Flower	Amount of water needed per day
Tulip	1 gallon
Geranium	3 and a half gallons
Rose	7 gallons

5	How many more gallons of water per day do geraniums require than tulips? A) 3 and a half gallons B) 2 and a half gallons C) 6 gallons D) 2 gallons E) Answer not given.
6	How many total gallons of water does he use per day? A) 11 B) 8 C) 11 and a half D) 12 and a half E) Answer not given.
7	How many full weeks can he continuously water his flowers if he only has 1000 gallons of water for them? A) 12 B) 11 C) 14 D) 13 E) Answer not given.

8	A solid 4-inch cube of wood is painted black. Afterwards, the cube is sliced into smaller 1-inch cubes, resulting in 64 small cubes. Of these 64, how many have either 3 faces painted or no faces painted? A) 32 B) 8 C) 24 D) 16 E) Answer not given.
9	The first 6 terms of the Fibonacci sequence are as follows: 1, 1, 2, 3, 5, 8, … Find the product of the 13th and 15th numbers in the Fibonacci sequence. A) 54,288 B) 142,130 C) 33,552 D) 87,843 E) Answer not given.
10	What is the sum of all prime numbers between 0 and 100? A) 963 B) 1155 C) 1060 D) 967 E) Answer not given.

1	Princess Peach and Princess Daisy both live in the Mushroom Kingdom, where stars will grant them immunity for a specific amount of time. Peach's stars grant her immunity for four hours each, while Daisy's grant her immunity for three hours each. If Peach and Daisy have the same amount of stars, and Peach will have immunity for seven hours longer than Daisy; then how many stars does each princess have?
2	If a white flamingo eats a magical shrimp, it has a ½ chance of becoming pink. If Francesca the Flamingo has eaten 5 shrimp today, what is the probability that she has NOT turned pink?
3	A class of boys and girls has a total of 10 girls in the class. If the probability of choosing a boy from the class at random is 7/9, how many total students are in the class?
4	Sonic the Hedgehog can collect 4 gold rings in a minute, while Knuckles the Echidna can collect 6 gold rings in a minute. If both animals go collecting gold rings for 24 minutes, how many more gold rings will Knuckles have than Sonic?
5	Alvin the chipmunk is two-thirds the height of his brother, Simon. Simon is five-fourths the height of their other brother, Theodore. If Theodore is 6 inches tall, how tall, in inches, is Alvin?
6	Pumpkins grow so that their diameter increases by one-half every month. If one pumpkin started out with a diameter of 24 inches, how large, in inches, will the diameter be after three months?
7	One rat, Ratatouille, can cook 13 meals in an hour at a fancy French restaurant. This same rat has 13 brothers that can each cook 4 meals per hour. The dinner rush, which lasts one hour, at the fancy French restaurant means that 22 meals need to be prepared. If Ratatouille is working the dinner rush, what is the minimum number of his brothers that he needs to ask for assistance?
8	The least common multiple of two numbers, A and B, is A times B. What is the greatest common factor?
9	If n is a positive counting number, what is the sum of all values of "n" such that the $\sqrt{n}$ varies from 5 by less than 1?
10	Let x < y and $5^2 + 12^2 + 9^2 + 40^2 = x^2 + y^2$ where x and y are positive counting numbers. What is the largest sum of x and y?

"Math is Cool" Championships – 2014-15

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5th Grade – February 27, 2015
Relay Contest

RELAYS - 5 minutes per relay – 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(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 the smallest counting number greater than 1?	2
Person 2	What is the sum of TNYWG and 100?	102
Person 3	Evaluate: 2014 - TNYWG.	1912
Person 4	What is the quotient of TNYWG and 2?	956
	Relay #1	**Answer**
Person 1	How many sides does a hexagon have?	6
Person 2	If each bird has 3 eggs, how many eggs would TNYWG birds have?	18
Person 3	Find one third of TNYWG.	6
Person 4	What is the smallest prime factor of TNYWG?	2
	Relay #2	**Answer**
Person 1	What is the next number in this sequence? 21, 41, 61, __	81
Person 2	Reverse the digits of TNYWG. (If AB is a two-digit number, then reversing the digits would result in BA.) Then, subtract the reversed number from the original number.	63
Person 3	Subtract TNYWG from the number of hours in three days.	9
Person 4	What is the sum of TNYWG and all the positive factors of 12?	37

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5th Grade – February 27, 2015

COLLEGE KNOWLEDGE BOWL ROUND #1 – SET 1

#	Problem	Answer
1	What is the side length of a square with an area of 49 square feet?	7 [feet]
2	What is the 5th prime number?	11
3	How long, in hours, does it take to travel 30 miles at 3 miles per hour?	10 [hours]
4	What is the cost of a dozen apples, in cents, if one apple is 4 cents?	48 [cents]
5	How many cups are in 2 gallons?	32 [cups]
6	A snail moves 2 inches an hour. How many hours does it take for the snail to move a foot?	6 [hours]
7	What is the probability, as a reduced fraction, of rolling a 1 or 6 when you roll a fair six-sided die?	1/3
8	How many sides does a heptagon have?	7
9	Biff and Eho are eating oranges. Biff can eat 3 more oranges an hour than Eho. If they ate a total of 18 oranges together in two hours, how many oranges did Biff eat?	12 [oranges]
10	Jasmine's mom was driving her to the "Math is Cool" championships which was 70 miles away. Part way to the contest, Jasmine realized she had forgotten her lucky pencil, so her mom went back and got it. They drove a total of 100 miles before finally getting to the contest. How far, in miles, had they driven before Jasmine realized she had forgotten her lucky pencil?	15 [miles]

COLLEGE KNOWLEDGE BOWL ROUND #2 – SET 2

#	Problem	Answer
1	If four people all shake hands with one another once, how many handshakes occur?	6 [handshakes]
2	Five friends are trying figure out all the different possible ways they can sit in a row. How many unique seating arrangements can be made?	120 [ways]
3	What is 10 percent of 200?	20
4	How many seconds are there in 4 minutes?	240 [seconds]
5	How many hours are in one week?	168 [hours]
6	What is the area of a rectangle with side lengths 4 feet and 6 feet?	24 [square feet]
7	The sum of the ages of a family of 5 is 113 years. What will the sum of the ages, in years, of the family of 5 be in 12 years?	173 [years]
8	Nellie was counting by 7's starting with 15. What is the sum of all the numbers between 100 and 120 that she counted?	219
9	What is the probability, as a reduced fraction, of getting two heads in two tosses of a fair coin?	1/4
10	How many minutes are there between 1:04 PM and 7:42 PM?	398 [minutes]

COLLEGE KNOWLEDGE BOWL ROUND #3 – SET 3

#	Problem	Answer
1	If today is Friday, what day of the week will it be 40 days from now?	Wednesday
2	What is the third degree measure in a triangle if the first two angles are 15 and 95?	70 [degrees]
3	If you jump rope at a rate of 5 jumps a second, how many jumps will you have in two minutes?	600 [jumps]
4	What is the probability, as a reduced fraction, of drawing an ace from a standard 52-card deck in one draw?	1/13
5	What is the sum of the reduced numerator and denominator of 45 divided by 81?	14
6	What is the area of a right triangle with legs 4 inches and 13 inches?	26 [square inches]
7	How many distinct ways can you arrange the letters in the word MATH?	24 [ways]
8	Morgan has 56 candy bars that she was going to divide evenly among her friends. If she had one more candy bar, then each friend would get 3 candy bars. How many friends does she have?	19 [friends]
9	The average age of a math team, made up of 4 students, is 10 years. The average age of the same math team and their coach is 14 years. How old, in years, is the coach?	30 [years]
10	Suppose five days before the day after tomorrow was Wednesday. What day of the week was yesterday?	Friday

COLLEGE KNOWLEDGE BOWL ROUND #4 – SET 4

#	Problem	Answer
1	How many miles does a bicyclist travel in 4 hours, if he travels four-and-a-half miles per hour?	18 [miles]
2	If cookies cost 53 cents and muffins cost 81 cents, how much, in dollars, does it cost in total to buy two of each?	[$] 2.68
3	A drawer contains 5 green socks, 3 red socks, and 6 purple socks. If the socks are pulled out of the drawer in a random order, how many socks must be removed in order to guarantee that two green socks have been removed from the drawer?	11 [socks]
4	What is the largest possible remainder when a number is divided by 45?	44
5	What is sixty percent of ninety?	54
6	If printing out a paper at the library costs 3 cents a sheet, how much will it cost, in dollars, to print out 99 sheets?	[$] 2.97
7	Elizabeth is 18 years old in 2014. If her older sister is 5 years older, what year was the older sister born in?	1991
8	What is the sum of the digits in the number two thousand fifteen?	8
9	What is the area of a square with a side length of 13 feet?	169 [square feet]
10	A bag contains 3 green marbles, 5 purples marbles, and 4 blue marbles. In one draw, what is the probability, as a reduced fraction, of drawing a green marble?	1/4

COLLEGE KNOWLEDGE BOWL ROUND #5 – SET 5

#	Problem	Answer
1	A palindrome is a number whose digits read the same forwards and backwards. What is the smallest three digit palindrome?	101
2	Four friends evenly split the cost of a pizza. How much did each person pay if the pizza cost eight dollars and eighty-four cents?	[$] 2.21
3	What is the probability, as a reduced fraction, of drawing a white marble from a bag that contains 16 black marbles and 4 white marbles?	One fifth [or one over five]
4	Leonard made fifteen dollars selling candy at 20 cents apiece. How many pieces of candy did he sell?	75 [pieces]
5	If 4 Billys equals one Bob, and 3 Bobs equals one Bertha; how many Billys does it take to make one Bertha?	12 [Billys]
6	The average of 6 numbers is 6. If 5 of the numbers are 1, what is the 6th number?	31
7	How many positive prime numbers have a remainder of zero when divided by 19?	1
8	Britney makes 25 percent of her free throws in basketball. How many shots is she expected to make if she attempts 40 shots?	10 [shots]
9	If it takes 13 seconds to fill a balloon with helium, how many balloons can be completely filled in 2 minutes?	9 [balloons]
10	A squirrel is saving nuts for winter. If it saves 18 nuts a day, how many nuts will it have in two weeks?	252 [nuts]

COLLEGE KNOWLEDGE BOWL ROUND #6 – SET 6

#	Problem	Answer
1	How many even counting numbers are between 55 and 77?	11 [numbers]
2	How many pounds are there in 80 ounces?	5 [pounds]
3	What is the next number in this sequence? 1,2,4,8, ___?	16
4	Mike arrived to his first class at 8:00 AM. If he was walking for 13 minutes, what time did he start walking to class?	7:47 AM
5	What is the average length of a song, in minutes, on a one hour CD if there are 12 songs?	5 [minutes]
6	Vivienne is folding paper roses. If it takes her 6 minutes to fold one, how long, in minutes, will it take her to fold 14 roses?	84 [minutes]
7	A triangle has two sides of length 8 feet and 11 feet. The length of the third side is a counting number when measured in feet. What is the shortest length, in feet, that the third side could be?	4 [feet]
8	Four consecutive whole numbers sum to 6. What is their product?	0
9	Sheila's prize goat weighs 160 pounds plus one-fifth its total weight. How much, in pounds, does the goat weigh?	200 [pounds]
10	The sum of two numbers is 821. The smaller of the two numbers is 409. What is the larger of the two numbers?	412

COLLEGE KNOWLEDGE BOWL ROUND – EXTRA

#	Problem	Answer
1	How many minutes pass between 4:21 AM and 4:59 AM?	38 [minutes]
2	Kate walks 1 mile in 17 minutes. How many minutes does it take her to walk 3 miles?	51 [minutes]
3	Joe has 23 cards. After he gives some away he only has 17 cards left. How many cards did he give away?	6 [cards]
4	Express seven and two-thirds as an improper fraction.	23/3
5	What is the product of the first 3 prime numbers?	30
6	A tree grows one foot a month starting from 1 foot tall. How many feet tall is it after a year?	13 [feet]

Extra

"Math is Cool" Championships -- 2014-15

School Name_____Team #_____

Proctor Name_____Room #_____

5th Grade   <u>Mental Math</u> – 30 sec per question

8 problems read orally to everyone - Approximately 8% of Individual Score - 25% of team score
You may NOT be seated next to anyone from your school. If you are MOVE NOW to avoid being disqualified! 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.*

	Answer	**1 or 0**	**1 or 0**
1	19 [pieces] [of fruit]		
2	32 [cm]		
3	6 [minutes]		
4	1/2		
5	81 [outcomes]		
6	48 [hamburgers]		
7	15 [books]		
8	3:35 p.m.		

"Math is Cool" Championships – 2014-15
5th Grade – February 27, 2015

School Name _____ Team # _____

Proctor Name _____ Room # _____

Team Multiple Choice Contest – 15 minutes – 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.**

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	A		
2	E ($76.22)		
3	C		
4	D		
5	B		
6	C		
7	A		
8	D		
9	B		
10	C		

"Math is Cool" Championships – 2014-15
5th Grade – February 27, 2015

School Name_____ Team #_____

Proctor Name_____ Room #_____

Team Contest – Score Sheet – 15 minutes – 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 a 1 or 0. Record all answers on the colored answer sheet.

DO NOT WRITE IN SHADED REGIONS

	Answer	1 or 0	1 or 0
1	7 [stars]		
2	1/32		
3	45 [students]		
4	48 [gold rings]		
5	5 [inches]		
6	81 [inches]		
7	3 [brothers]		
8	1		
9	494		
10	60		

"Math is Cool" Championships -- 2014-15

5th Grade – February 27, 2015

PRACTICE RELAY

Answer for person # 1	Answer for person # 2	Answer for person # 3	Answer for person # 4
2	**102**	**1912**	**956**
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
6	**18**	**6**	**2**
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
81	**63**	**9**	**37**
1 or 0	1 or 0	1 or 0	2 or 0

"Math is Cool" Championships -- 2014-15

School Name_____Team #_____

Proctor Name_____Room #_____

5th Grade   Mental Math – 30 sec per question

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

"Math is Cool" Championships – 2014-15

5th Grade – February 27, 2015

School Name _____ Team # _____

Proctor Name _____ Room # _____

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"Math is Cool" Championships – 2014-15
5th Grade – February 27, 2015

School Name_____Team #_____

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5			
6			
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9			
10			