"Math is Cool" Championships – 2009-10

Sponsored by:

6th Grade – February 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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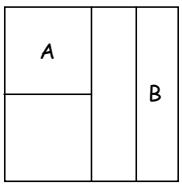
Individual Contest

Record all answers on the colored cover sheet.

1	$1000 + 900 + 20 + 1 + 2000 + 300 + 50 + 2 = ?$
2	One side of a rectangle is 5 cm. The area of the rectangle is 45 square cm. Find the length in cm of the longest side of this rectangle.
3	What is the greatest common factor of 65 and 52?
4	There are 24 ways for n people to stand in a row. What is n?
5	If the day after tomorrow is Friday, what day will it be 367 days from today?
6	A baker's dozen is 1 more than a dozen. How many doughnuts are in a baker's dozen?
7	Baby Bob is taking blocks from a box. The box has 100 blocks, and Bob takes out 8 blocks in each handful. What is the minimum number of handfuls that Bob will need to take to leave fewer than 50 blocks in the box?
8	Find the value of $(5+0)(5-0)+(5\times 0)$.
9	If Alice saves 55 cents a week, how many dollars will she save in three weeks?
10	If you multiply the digits of a certain 3-digit counting number (positive integer), the product is 20. What is the smallest possible value for this 3-digit number?
11	The positive square root of 17 is between the two consecutive whole numbers m and n, where $m < n$. What is n?
12	Find the sum of the first 13 **<u>even</u>** counting numbers (positive integers).
13	In how many prime numbers less than 100 will you find the digit "5"?
14	Shashank is growing a bonsai tree. The tree grows 2 cm on the first day, 4 cm on the second day, 8 cm on the third day, and so on, following this multiplication pattern. How many centimeters in all will the tree have grown after 6 days?
15	What is the seventh counting number (positive integer) which is neither a multiple of two nor of three?

16	A regular hexagon and a regular octagon each have the same side length. The two shapes are put together, edge to edge with no overlap, to form a new polygon. The perimeter of the new polygon is 612 inches. What is the length, in inches, of each side of the polygon?
17	What is the probability that you roll a sum of eight with two standard dice?
18	Find the product of the remainder when 784 is divided by 23 and the quotient when 860 is divided by 4.
19	How much greater is 17 than negative 4?
20	What is the median of all whole-number multiples of 6 between 115 and 245?
21	With how many different sets of standard U.S. coins can you make exactly twenty-five cents?
22	Helen is playing tennis. If Helen has a $\frac{3}{10}$ probability of hitting an ace when she serves, what is the probability that she hits 4 aces in 4 serves? Answer as a reduced fraction.
23	A circle of diameter 8 units is inscribed in a square. What is the area (in square units) between the circle and the square?
24	Janet drove 392 miles. On this trip, she used x gallons of gas, and her car got an average of $2x$ miles per gallon. What is x?
25	A rectangular prism has a base that is 9 by 13 inches. The surface area of the prism is 982 square inches. In cubic inches, what is the volume of the prism?
26	How many of the following symbols have a vertical line of symmetry? $\Phi\ \Gamma\ \Pi\ \Theta\ \Sigma\ \Upsilon\ \Omega\ \Psi\ Z$
27	Harshini can mix a batch of cookie dough in 30 minutes. Miya can mix a batch of cookie dough in 45 minutes. Suman can't cook, and slows down everybody he works with to half-speed. How many minutes will it take the three of them working together to mix a batch of cookie dough?
28	A circular dartboard has a diameter of 50 centimeters. If the circular bull's-eye region has a diameter of 5 centimeters, what is the probability that a dart that hits a random point on the dartboard lands in the bull's-eye? Answer as a fraction.
29	If 3^n has 5 digits, what is the smallest possible value of n?
30	In a barn at Downwind Acres, there are mutant chickens (each with 3 heads and one leg) and mutant cows (each with 2 heads and 5 legs). If there are 64 heads and 69 legs in the barn, how many mutant chickens are in the barn?

Challenge Questions

31	Jinglin can braid her hair in three ways. On weekdays she makes one short braid with 13 twists of her hair. On Saturdays Jinglin makes two braids, each with 31 twists. On Sundays she braids one giant braid consisting of 133 twists. If Jinglin makes her first braid on a Saturday, on what day of the week will she make her 4,672nd twist?
32	A semicircle is inscribed in a rectangle with area 144 square centimeters. In square cm, what is the area of the semicircle?
33	Will Bryan has bought a solution that is supposed to dissolve gold. It is made from 0.5 gallons of pure Aurizolv mixed with 1.5 gallons of water. It doesn't work, so Will adds more pure Aurizolv to make it stronger. The resulting solution is 60% Aurizolv. How many gallons of Aurizolv did Will <u>add</u>? If your answer is not a whole number, give it as a decimal.
34	In a certain number sequence, the third and later terms are found by adding the two previous terms. If the first term of the sequence is 2 and the fourth term is 12, what is the sixth term?
35	Sandra turned in her math homework with the following incorrect multiplication problem on it: $487 \times 69 = 40{,}681$. Changing two of the ten digits of the equation to "3", with no other changes, would product a correct equation. What is the sum of the digits that need to be changed?
36	A square is subdivided into four rectangles of equal area, as shown. If the perimeter of rectangle B is 5 inches greater than the perimeter of rectangle A, what is the area (in square inches) of the original large square? 
37	When Fiona feeds an odd number to her funny machine, it adds 5 and spits out the answer. When she feeds it an even number, it divides by 2 and spits out the answer. Fiona fed her machine an odd integer, then fed this first answer back to the machine. When she got the second answer, she fed it back to the machine also. The third answer Fiona got from her machine was 23. What was the odd integer Fiona first fed her machine?
38	Five dogs (Fido, Ruff, Lassie, Odie, and Snoopy) were playing in the park. Altogether, they had 5 identical Frisbees. In how many ways could the 5 Frisbees be distributed among the dogs when they leave the park to go home?
39	In the following equation, A, B, C, and D are all positive integers such that A has 4 factors, B has 6 factors, and D has 8 factors. What is the smallest possible sum of A, B, C, and D, if $\frac{A \times B}{C} = D$?
40	My 12-hour digital clock shows hours and minutes, but not seconds. The sum of the digits of the time showing on my clock now is 3. In 165 minutes, the sum of the digits will be 9. What time is it now? ("AM" or "PM" not required.)

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Team Multiple Choice Contest

Junk Bond, the debonair-est of spies, is engrossed in an epic battle of wits with the dreaded Dr. Maybe. Fortunately, Bond carries several high-tech items in his utility belt. Unfortunately, not all of them work quite right. The items he carries in his utility belt are listed in the table below, along with their quantity and the chance each item will explode on use. (Any item that doesn't explode simply sits there uselessly.)

Item	Quantity	Probability of Explosion
Exploding Chewing Gum	10	70%
Spy Watch	5	100%
Dynamite	8	0%

1	If all Bond's high-tech items that can explode do so, how many explosions will there be? A) 23 B) 18 C) 15 D) 13 E) 12
2	Sometimes Bond carries his high-tech items in a pocket protector. If a pocket protector can hold any 3 of Bond's items, how many pocket protectors would be needed to hold all of Bond's items? A) 9 B) 8 C) 7 D) 6 E) Answer not given
3	If Junk Bond uses items at random from his utility belt, how many will he have to use to ensure that an item will explode? A) 19 B) 9 C) 5 D) 3 E) Answer not given
4	How long will it take Junk Bond to activate all of his items if he activates one every 3 seconds? A) 1 min, 9 sec B) 1 min, 6 sec C) 1 min, 3 sec D) 1 min E) Answer not given
5	Junk Bond pulls out one piece of gum, one stick of dynamite, and one watch. He can apply each item to any one of four distinct doors. In how many ways can he apply all three items? A) 24 B) 12 C) 64 D) 7 E) Answer not given
6	Junk Bond desperately needs minty-fresh breath to maintain his debonair-ness. He brought a piece of regular minty-fresh gum along with his exploding gum but he mixed them up and can't tell them apart. If he picks a piece of gum at random and uses it, what is the probability that it will explode? A) 7/20 B) 7/10 C) 4/11 D) 7/11 E) Answer not given
7	Each stick of dynamite is in the shape of a cylinder with height 12 centimeters and diameter 5 centimeters. What is the total volume, in cubic centimeters, of all of Junk Bond's dynamite? A) 2400π B) 600π C) 480π D) 75π E) Answer not given

Problem Resated: Junk Bond, the debonair-est of spies, is engrossed in an epic battle of wits with the dreaded Dr. Maybe. Fortunately, Bond carries several high-tech items in his utility belt. Unfortunately, not all of them work quite right. The items he carries in his utility belt are listed in the table below, along with their quantity and the chance each item will explode on use. (Any item that doesn't explode simply sits there uselessly.)

Item	Quantity	Probability of Explosion
Exploding Chewing Gum	10	70%
Spy Watch	5	100%
Dynamite	8	0%

8	Dr. Maybe traps Junk Bond in a 5 meter by 5 meter square pit. There is one crocodile chained to each corner and each chain is 1.5 meters long. Assuming that the crocodiles' mouths extend 0.5 meters beyond each chain, how much room, in square meters, does Junk Bond have to maneuver safely? A) 21 B) $\frac{100-9\pi}{4}$ C) 19 D) 17 E) $25-4\pi$
9	Dr. Maybe is running down a corridor at 3 meters per second with Junk Bond in hot pursuit, running at 5 meters per second. Unfortunately, a vicious crocodile is chasing Junk Bond in even hotter pursuit*, at 9 meters per second. If the crocodile starts 50 meters behind Dr. Maybe and 20 meters behind Junk Bond, how close to Dr. Maybe will Junk Bond be when the crocodile catches Bond? A) 20 meters B) 25 meters C) 45 meters D) 5 meters E) Answer not given (To be continued…)

*Please note that, in fact, the crocodile's pursuit would not be any hotter than its surrounding environment (accounting for friction and air resistance) as crocodiles are cold-blooded animals. References to temperature should be considered in a purely dramatic sense. We apologize for the confusion.

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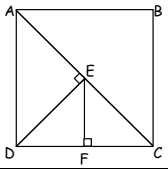
Team Contest

1	Figure ABCD is a square with side length 4 cm. Find the number of square cm in the area of trapezoid AEFD. 
2	What number must be subtracted from 2010 to give the same result as the quotient of 2010 divided by 15?
3	Matt has more pennies than nickels, more nickels than dimes, more dimes than quarters, and more quarters than half-dollars. Matt has at least 3 quarters and at least one of each other kind of coin listed. What is the smallest number of cents Matt could have? (Answer in cents, not dollars.)
4	Put the following values in order from smallest to largest. Your answer should consist of 4 letters in the correct order. $A = 47\%$ $B = \frac{5}{8}$ $C = \frac{98}{196}$ $D = 0.6666\ldots$
5	My Belittling Calculator subtracts 10 from every number I enter, then performs calculations correctly on the belittled numbers and correctly displays the results of these calculations. I enter $17 \times n + 33$ (where n stands for an unknown number), and the display shows 429. What is n?
6	A recipe calls for two-thirds of a cup of butter for every half cup of sugar. If I scale the recipe to use two-thirds of a cup of sugar, how many cups of butter will I need? If your answer is not a whole number, express it as a reduced common fraction.
7	Bertha's book bags are decorated with drawings of fantasy kittens. There are 7 kittens on each bag, each kitten with 3 tails. Each tail has 11 zigzag stripes. How many zigzag stripes in all are on 5 of Bertha's book bags?
8	Two positive integers are formed from the digits 2, 8, 5, and 4. If each digit is used exactly once, what is the largest possible sum of the two integers?
9	Jen spent a total of $6.80 on carrots and apples. The carrots cost $2.75 in all, and the apples cost 45¢ each. How many apples did Jen buy?
10	The four members of a Math Is Cool team are comparing scores on the Individual Test. Amy scored 3 points less and Brad scored 6 points less than the average of the team members, while Cara scored 5 points more than the average. Don scored 28 points. What was the score of the highest-scoring member of this team?

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Relay Contest

RELAYS - 5 minutes per relay

	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	What is the value of $\left(\frac{2}{3}\right)(45)(67)$?	2010
Person 2	Sally writes TNYWG on a card, and then cuts the card into pieces so that each piece has a single digit on it. Sally draws a fraction bar, then arranges all 4 pieces of card to form the largest fraction possible. Find the value of Sally's fraction, and simplify your answer completely.	200
Person 3	Add the number of months in TNYWG years, plus the number of days in TNYWG weeks, plus the number of hours in TNYWG days.	8600
Person 4	Biff walked for TNYWG meters at a speed of 107.5 meters per minute, while Eho walked for 7200 meters at a speed of 120 meters per minute. They started walking at the same time. Eho finished his walk how many minutes before Biff finished his?	20 [min]
	Relay #2	Answer
Person 1	According to a school rating report, Discount Spy School is ranked 15 places below the Easy Espionage Correspondence Course, which is ranked 40 places below the Washington Audubon Society, which is ranked in 171st place. What is the numerical rank of the Discount Spy School if 1st place is the highest rank?	226 [th place]
Person 2	The Discount Spy School Cheerleading Squad has TNYWG members. When they arrange themselves into the largest number of rows possible with 30 members per row, how many members will be left over?	16 [members]
Person 3	The Advanced Explosives class at the Discount Spy School meets for TNYWG minutes per day, on Monday, Wednesday, and Friday of each week for 5 weeks. How many total minutes does the Advanced Explosives Class meet?	240 [min]
Person 4	The Discount Spy School has TNYWG teachers. 300 students started the semester, but one-fourth of these forgot to attend classes, and another 177 dropped out because the Introduction to Spying class was too hard. In simplest form, what is the ratio of the number of remaining students to the number of teachers? If your answer is not a whole number, give it as a reduced fraction.	1/5

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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 one-sixth of the sum of 15 and 21?	6
1.2	What is the perimeter of a rhombus with side length 8 meters?	32 [meters]
1.3	Alice has 11 purses. In each purse, she has two more dollar bills than she has purses. How many dollar bills does Alice have in all her purses together?	143 [bills]
1.4	What is the greatest common factor of 108 and 45?	9
PERSON 2 NAME:		
2.1	The minute hand of a clock is 6 inches long. What is the area, in square inches, that the hand travels over in half an hour?	18π [in^2]
2.2	What is one-ninth of the sum of 30 plus 5 plus 30 plus 5 plus 2?	8
2.3	What is the length in centimeters of each side of a regular octagon with a perimeter of 48 centimeters?	6 [cm]
2.4	Evaluate three to the fifth power divided by three to the second power.	27
PERSON 3 NAME:		
3.1	In feet, what is the diameter of a circle with an area of 49 pi square feet?	14 [ft]
3.2	Two angles are supplementary. What is their sum, in degrees?	180 [°]
3.3	Express thirty-five thousand in scientific notation.	3.5×10^4
3.4	The result when you multiply 12 times 6, then add 8, is how much less than the result when you add 12 and 8, then multiply by 6?	40
PERSON 4 NAME:		
4.1	What is the difference between 48 and the sum of 12 and 13?	23
4.2	There are 15 cows and 13 chickens in a field. How many more legs are in this field than there are in a field with 15 chickens and 13 cows?	4 [legs]
4.3	What is the least common multiple of 2, 8, and 11?	88
4.4	What is 15 percent of 280?	42

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Set A

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	What is the product of nineteen and seventeen?	323
2	There are fifty elves in Santa's workshop. Fourteen elves make rocking chairs, thirty-three elves make soccer balls, and eight elves make both. How many elves make neither rocking chairs nor soccer balls?	11 [elves]
3	A cylindrical cake is cut into twelve pieces. What is the smallest number of cuts that could have been made?	4 [cuts]
4	Dr. Maybe and four of his henchmen are in a lineup. In how many orders can they stand side-by-side?	120 [orders]
5	What is the remainder when eight hundred twenty-two is divided by six?	0
6	The point "4 comma negative 2" on a coordinate grid is reflected first over the x axis and then over the line $x = 5$. As an ordered pair "x comma y", what are the coordinates of the final point?	$(6,2)$ ("6 [comma] 2")
7	If 12 percent of my number is one thousand eight, what is my number?	8400
	Extra Problem – Only if Needed	
8	What number comes next in the following pattern? 3, 4, 6, 10, 18, 34, 66, …	130

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Set A

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	What is the largest even product that can result from multiplying four of the five smallest prime numbers together?	770
2	What is the greatest common factor of 84 and 182?	14
3	Four meters of fencing are placed between two posts. If Jim places 180 meters of fencing in a straight line, how many posts does he use?	46 [posts]
4	The product of 18 and my number is equal to the product of one-third of my number times what?	54
5	A column of smoke has a height of sixteen feet. The column doubles in height every three seconds. After how many seconds does the column of smoke reach a height of one thousand twenty-four feet?	18 [seconds]
6	The ratio of diamonds to emeralds in a bag of jewels was 8 to 7. How many emeralds and diamonds in all are there in the bag if 56 of the jewels are emeralds?	120 [jewels]
7	A train starts moving at fifteen miles per hour, with the front of the train at the entrance of a five-mile tunnel. The train is a quarter of a mile long. How many minutes does it take the train to completely exit the tunnel?	21 [minutes]
	Extra Problem – Only if Needed	
8	In a sample of widgets, 18 out of 300 were found to be defective. Out of 500 widgets, how many would you expect to be defective?	30 [widgets]

"Math is Cool" Championships – 2009-10

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Set A

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	Junk Bond is driving a steamroller over the remains of Dr. Maybe's mansion. The radius of the cylindrical roller is two feet and the width of the roller, which is the height of the cylinder, is six feet. The roller rotates every three seconds. How many square feet does the roller cover in nine seconds?	72 pi [sq ft]
2	Find the value of 5 more than the product of x times 7, if x equals one-half. Give your answer as a reduced common fraction.	$\frac{17}{2}$
3	Dr. Maybe's nine henchmen are having a contest to see who will be on Dr. Maybe's elite three-member bodyguard team. How many ways are there to award first, second, and third place in this contest?	504 [ways]
4	Rita is now six times as old as Bill. After three years, Rita will be three times as old as Bill. How many years old will Bill be five years from now?	7 [yrs]
5	Give the <u>letter</u> of the median of the following three numbers: A equals 1000 percent, B equals zero point nine repeating, C equals ten squared.	A
6	Add one-third, one-fourth, and one-sixth, and give your answer as a decimal.	0.75 or .75
7	Suman's bag of jellybeans contains two different flavors of jellybeans. There are ten buttered popcorn jellybeans and eight berry-blue jellybeans. If Suman draws two jellybeans from this bag without replacement, what is the probability that he will draw first a buttered popcorn bean and then a berry-blue bean?	$\frac{40}{153}$
	Extra Problem – Only if Needed	
8	Express the base-5 number "one two three base 5" in base 10.	38

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Set B

COLLEGE KNOWLEDGE BOWL ROUND #1

#	Problem	Answer
1	It takes a crew of 8 workers 6 hours to clean a large auditorium after a college basketball game. At this rate, how many additional workers would be needed to clean the auditorium in 4 hours?	4 [workers]
2	What is forty-five squared minus thirty-five squared?	800
3	Katie is in a game of musical chairs with four friends. After each round, one person is eliminated at random. What is the probability that, by the end of the first two rounds, Katie has still not been eliminated? Give your answer as a reduced fraction.	3/5
4	How many edges does a square pyramid have?	8 [edges]
5	In a football game, a certain team scores only 7-point touchdowns or 3-point field goals. How many different combinations of touchdowns and field goals (without regard to order) could earn this team a score of twenty-eight points?	2 [combos]
6	Subtract one-sixth from the product of two-thirds and three-eighths. Give your answer as a reduced fraction.	1/12
7	It is autumn in New England. A red oak loses two leaves on the first day, five leaves on the second day, eight leaves on the third day, and so on. What is the total number of leaves that the tree will lose in ten days?	155 [leaves]
	Extra Problem – Only if Needed	
8	Find the volume, in cubic inches, of a circular pizza with diameter twenty-six inches and depth two inches.	338 pi [cubic in.]

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Set B

COLLEGE KNOWLEDGE BOWL ROUND #2

#	Problem	Answer
1	A slow clock that loses five minutes every hour is set to the correct time at twelve o'clock PM. What is the correct time when the slow clock next displays a time of two forty-five PM?	3:00 PM
2	A set of 5 integers has a median of 4 and a mean of 5. If the largest number in the set is 30 and no number occurs more than once, what is the smallest possible number in the set?	-41
3	King McArthur, his brother Lenny, and six Scottish knights are sitting down to a heaping helping of haggis. In how many ways can the men arrange themselves around the circular table?	5,040 [ways]
4	What is the product of the two smallest prime numbers larger than twenty?	667
5	If A equals the fraction 29 over 47 and B equals the fraction 145 over 285, is A greater than, less than, or equal to B?	greater than
6	Dr. Maybe is being interrogated. When asked a question, he has a fifty percent chance of saying "maybe," a thirty percent chance of not answering, and a twenty percent chance of saying "perhaps." If Dr. Maybe is asked two questions, what is the probability that he answers first "maybe," and then "perhaps?" Answer as a percent.	10 [%]
7	A thirty-foot ladder leans against a wall. If the ladder reaches a height of twenty-four feet up the wall, how many feet is the base of the ladder from the base of the wall?	18 [feet]
	Extra Problem – Only if Needed	
8	What is the mean of the fifty smallest odd counting numbers?	50

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Set B

COLLEGE KNOWLEDGE BOWL ROUND #3

#	Problem	Answer
1	How many times can a forty-foot string wrap *completely* around a cylindrical pole with diameter two feet?	6 [times]
2	What is the probability of drawing a queen, a heart, or a spade on your first draw from a standard deck of fifty-two cards?	7/13
3	A haiku is a three-line poem with five syllables in the first line, seven syllables in the second line, and five syllables in the third line. How many syllables are in seven haikus?	119 [syllables]
4	A pitcher of soft-drink concentrate is twenty-five percent high fructose corn syrup. After two liters of water are added, the percentage of high fructose corn syrup is twenty percent. How many liters of concentrate were originally in the pitcher?	8 [liters]
5	How many fives would you need to multiply together to get a product greater than one thousand?	5 [fives]
6	Convert the fraction 115 over 15 to a decimal, and round to the nearest hundredth.	7.67
7	Twenty-four saltine crackers absorb two pints of clam chowder. How many saltine crackers will absorb 11 gallons of clam chowder?	1056 [crackers]
	Extra Problem – Only if Needed	
8	What is the area, in square units, of an equilateral triangle with side length 12 units?	$36\sqrt{3}$ [sq un]

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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	4273		
2	9 [cm]		
3	13		
4	[n=] 4		
5	Saturday		
6	13 [doughnuts]		
7	7 [handfuls]		
8	25		
9	[$] 1.65		
10	145		
11	5		
12	182		
13	3 [prime numbers]		
14	126 [cm]		
15	19		
16	51 [in]		
17	5/36		
18	430		
19	21		
20	180		

	Answer	1 or 0	1 or 0
21	13 [sets]		
22	81/10,000		
23	$64-16\pi$ [un^2]		
24	[x=] 14		
25	1989 [in^3]		
26	5 [symbols]		
27	36 [min]		
28	1/100		
29	9		
30	14 [chickens]		
31	Friday		
32	36π [cm^2]		
33	1.75 [gal]		
34	31		
35	13		
36	100 [in^2]		
37	87		
38	126 [ways]		
39	45		
40	1:20 [AM or PM not required, but either is OK]		

"Math is Cool" Championships – 2009-10

6th Grade – February 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	C		
2	B		
3	A		
4	B		
5	C		
6	D		
7	B		
8	E		
9	A		

"Math is Cool" Championships – 2009-10

6th Grade – February 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	6 [cm^2]		
2	1876		
3	196 [¢ or cents]		
4	ACBD		
5	68		
6	8/9 [cups]		
7	1155 [stripes]		
8	856		
9	9 [apples]		
10	29 [points]		

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KEY

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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
2010	**200**	**8600**	**20 [min]**
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
226 [th place]	**16 [members]**	**240 [min]**	**1/5**
1 or 0	1 or 0	1 or 0	2 or 0