

"Math Is Cool" Championships - 1996-97

February 7, 1997

Individual Contest, Grade 4

1. Evaluate: 235×721 .
2. With the toss of a six sided dice, what is the probability you will get a four?
3. What is the first prime number greater than 10?
4. What is the perimeter of a square with a side of length 13?
5. Evaluate: $\frac{5}{11} + \frac{2}{11} - \frac{3}{11}$
6. What is the remainder when 352 is divided by 3?
7. The sum of Biff and Eho's ages is 23, what will the sum of their ages be in 7 years?
8. What is the area of a right triangle with legs equal to 5 and 12?
9. Evaluate: $0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0 + 0$.
10. Evaluate: $5 \times 12 \times 13 \times 0 \times 25 \times 16$.
11. What should be in the blank? $3 + 4 + 5 + 6 = 7 + 8 + 9 + 10 - \underline{\hspace{2cm}}$
12. If Biff's sock drawer contains 8 red socks, 4 purple socks, 9 gray socks, and 3 green socks, how many socks must be drawn to be sure of getting a matching pair?
13. The product of 1000 whole numbers is 1000. What is the largest possible value the sum of the numbers can have?
14. Evaluate: $(1 \div 1) \times (2 \div 2) \times (3 \div 3) \times (4 \div 4)$.

15. Stamps cost 32¢ each, how much does it cost to buy 5 of these stamps?
16. Biff is 25 years old and Eho is 12 years old. What is the difference between Biff and Eho's ages?
17. Evaluate: $25,328 - 19,879$.
18. Evaluate: $3 - 2 + 4 - 3 + 5 - 4 + 6 - 5 + 7 - 6 + 8 - 7$.
19. The wool from 100 sheep can make 600 coats. How many coats can the wool from 1 sheep make?
20. Evaluate: $1995 + 1996 + 1997$.
21. With the toss of a six sided die, what is the probability of rolling a one or a two?
22. From a standard deck of cards, what is the probability of drawing a queen in a single draw?
23. Biff drove his car for 1 hour, 22 minutes, and 23 seconds. What is the total number of seconds that Biff drove his car?
24. Event A occurs every 2 days and event B occurs every seven days. If both events occur on January 1st, what is the next day that both events will occur again.
25. What time is it 47 minutes after 7:30 p.m.? (answer must have an a.m. or p.m.)
26. Biff and Eho were supposed to meet at 11:30 a.m. Biff arrived on time, but Eho arrived 103 minutes late. When did Eho arrive? (answer must have an a.m. or p.m. on it)
27. Eho has 3 dozen socks. What is the total number of socks he has?
28. Biff moved a box 4 yards. How many inches did he move the box?
29. During a leap year, in what month does the 170th day occur?
30. What is the sum of the first two primes?

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Team Contest, Grade 4

February 7, 1997

1. In the single draw from a standard deck of cards, what is the probability you will get a club or a red seven?
2. Find the sum of $1 + 2 + 3 + 4 + 5 + \dots + 20 + 21 + 22 + 23$.
3. A palindrome is a number that reads the same forwards and backwards. 13431 is a palindrome. What is the next palindrome greater than 13431?
4. How many ways can Lisa make 50¢ using only quarters, dimes and nickels?

Example: 1 quarter, 2 dimes, 1 nickel
 0 quarters, 3 dimes, 1 nickel
5. If a widget is 2 feet long, then how many inches long are 3 widgets?
6. Biff has \$4.43. What is the most number of dimes Biff could have?
7. Jina spots a rabbit at 1:33 p.m. She spots the next rabbit at 2:01 p.m., the next at 2:40 p.m. and the last one at 2:45 p.m. What is the average time between consecutive spottings?
8. In a contest there was a question of the form $AB + 23$. Jina miscopied B and got the answer 45. Lisa miscopied A and got the answer 36. What is the number AB?
9. Jina went to the store and bought a pen and some ink. The pen and the ink cost \$1.10 together. The pen was a dollar more than the ink. How much does the pen cost.
10. How many ways can you rearrange the letters in SMALL?

"Math Is Cool" Championships -- 1996-7

4th Grade - February 7, 1997

Mental Math

Person #1

1. What is the product of 6 and 8?
2. What is the sum of 9 and 12?
3. What is 24 divided by 3?
4. What is the largest possible remainder when you divide a number by 7.

Person #2

1. What is the product of 9 and 8?
2. What is the difference between 15 and 11?
3. What is 18 divided by 2?
4. What is the name of the answer when you divide two numbers without getting a remainder?

Person#3

1. What is the product of 3 and 7?
2. What is the difference between 21 and 17?
3. What is 26 divided by 13?
4. What is the smallest prime number?

Person#4

1. What is the product of 5 and 8?
2. What is the sum of 43 and 10?
3. What is the difference between 28 and 7?
4. How many feet are in a mile?

"Math Is Cool" Championships -- 1996-7
4th Grade - February 7, 1997
College Knowledge Bowl Questions #1

1. What is $1 + 2 + 3 + 4 + 6 + 8 + 11$?

Answer: 35

2. What is $5 \times 6 \times 7 \times 2$?

Answer: 420

3. How many inches are in 12 feet?

Answer: 144

4. What is the probability of drawing a red card or a black ace in one draw from a standard deck of 52 cards?

Answer: $28/52$ or $14/26$ or $7/13$

5. One sheep make four coats. How many coats can 11 sheep make?

Answer: 44

6. What is the remainder when 321 is divided by 7?

Answer: 6

7. In my drawer I have red, green, blue and yellow socks. How many socks must I remove to insure that I have at least two of the same color?

Answer: 5

"Math Is Cool" Championships -- 1996-7
4th Grade - February 7, 1997
College Knowledge Bowl Questions #2

1. How many total letters are in the word MATHEMATICS?

Answer:11

2. What is the perimeter of a triangle with sides 17, 10 and 25?

Answer:52

3. If three people all shake hands with each other once, how many handshakes occur?

Answer:3

4. What is the average of the following numbers: 5, 6, 7, 8 and 9?

Answer:7

5. What comes next in the sequence? 5, 8, 11, 14, _____

Answer:17

6. The sum of two consecutive odd numbers is 16. What is the smallest number?

Answer:7

7. What is the tens digit of the product of 23412 and 10000?

Answer:0

"Math Is Cool" Championships -- 1996-7
4th Grade - February 7, 1997
College Knowledge Bowl Questions #3

1. How many sides does a quadrilateral have?

Answer: 4

2. The sum of two consecutive numbers is 23. What is the smallest of the two numbers?

Answer: 11

3. What is the greatest common factor of 6, 4 and 18?

Answer: 2

4. There are chickens and cows in a field, there is a total of 7 heads and 24 feet. How many cows are in the field?

Answer: 5

5. What is the sum of the first four primes?

Answer: 17

6. What is the perimeter of a square with sides of length 16?

Answer: 64

7. What is the value of 4 quarters, 3 dimes, and 12 pennies.

Answer: \$1.42 or 142¢

"Math Is Cool" Championships -- 1996-7

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Individual Contest - Score Sheet

Score:

KEY

Full Name: _____

School: _____

DO NOT WRITE IN SHADED REGIONS

Answer		
1. 169,435		
2. 1/6		
3. 11		
4. 52		
5. 4/11		
6. 1		
7. 37		
8. 30		
9. 0		
10. 0		
11. 16		
12. 5		
13. 1999		
14. 1		
15. \$1.60 or 160¢ or 1.60		

Answer		
16. 13		
17. 5,449		
18. 6		
19. 6		
20. 5,988		
21. 2/6 or 1/3		
22. 4/52 or 2/26 or 1/13		
23. 4943 seconds or 4943		
24. Jan. 15th		
25. 8:17 p.m.		
26. 1:13 p.m.		
27. 36		
28. 144		
29. June		
30. 5		

"Math Is Cool" Championships -- 1996-7

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Team Contest - Score Sheet

Score:

KEY

School: _____

Team #: _____

DO NOT WRITE IN SHADED REGIONS

Answer			
1.	15/52		
2.	276		
3.	13,531		
4.	10		
5.	72		
6.	44		
7.	24		
8.	23		
9.	\$1.05 or 105¢ or 1.05		
10.	60		

"Math Is Cool" Championships -- 1996-7

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Mental Math - Score Sheet

Score:

KEY

School: _____ Team #: _____

-
- A. 1. 48
2. 21
3. 8
4. 6

-
- B. 1. 72
2. 4
3. 9
4. Quotient

-
- C. 1. 21
2. 4
3. 2
4. 2

-
- D. 1. 40
2. 53
3. 21
4. 5,280 feet or 5,280

"Math Is Cool" Championships -- 1996-7

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Relay Contest - Score Sheet

Practice relay

26

Answer for relay #1

10

Answer for relay #2

77