| | | | Answers | Score | |
|---|---|---|---|---|---|
| **1.** | What fraction of the figure is shaded?  | 1. | 5/12 | | |
| **2.** | Rebecca and her brother went shopping. She spent $12.88 on a bag and $9.75 on a cap. She then spent $13.45 on a book. If she had $8.19 left, how much did Rebecca have at first? | 2. | $44.27 | | |
| **3.** | I am thinking of a number that is less than 1000 but greater than 459. The hundreds digit is even and is 2 less than the ones digit. The tens digit is half the ones digit. What number am I thinking of? | 3. | 648 | | |
| **4.** | Lana's sock drawer has only black and blue socks. It is midnight and the light is switched off. What is the minimum number of socks that she has to remove from the drawer to make sure she has at least one matching pair of socks? | 4. | 3 | | |
| **5.** | What is the maximum amount of regions you can divide a circle using 5 lines? | 5. | 16 | | |
| **6.** |  Three sisters, Sammy, Tammie, and Lana went on a vacation together. Sammy spent $2180, which is $390 more than what Tammie spent. Lana spent $265 less than Tammie. How much did Lana spend? | 6. | $1525 | | |
| **7.** | A wire of length 80 inches was used to form a square. If 4 inches of it was not used, find the side length of the square? | 7. | 19 [inches] | | |
| **8.** | In a shoebox Dan can fit either 10 small cars or 6 trucks. If Dan has 5 full shoeboxes and 42 vehicles in them, how many small cars he has? | 8. | 30 [cars] | | |

Division N – Grade 4

| | | | | | |
|---|---|---|---|---|---|
| **9.** | During a pizza party each of three identical pizzas were divided into 8 equal pieces. Then each of these pieces were divided into 2 equal pieces. After that each of the participants of this party got such a piece of pizza and 4 more pieces were left. How many people were at this party? | 9. | 44 [people] | | |
| **10.** | 11 ones + 11 tens + 11 hundreds = ___? | 10. | 1221 | | |
| **11.** | The width of a rectangular coffee table is the same as the side of equilateral triangle, its length is 10 cm more than its width. The perimeter of the equilateral triangle is 360 cm. What is the area of the coffee table? | 11. | 15600 [$cm^2$] | | |
| **12** | A piece of rectangular fabric 32 in by 16 in is cut in half. Each of the pieces is cut in half again. The cutting process is repeated until a piece 2 cm by 1 cm is obtained. What is the minimum amount of cuts needed? | 12 | 8 | | |
| **13.** | Maya the ballerina got a compass for her birthday. She made ¾ -turn clockwise than, $90^0$-turn counterclockwise. And she ended up facing West. Which direction was Maya facing at first? | 13. | East | | |
| **14.** | How many times a day does a digital watch with four digits shows palindrome (sequence that reads the same backwards as forwards)? In the picture there is an example of palindrome.   | 14. | 16 00:00, 23:32, 22:22, 21:12, 20:02, 15:51, 14:41, 13:31, 12:21, 11:11, 10:01, 05:50, 04:40, 03:30, 02:20, 01:10 | | |
| **15.** | There are bicycles and tricycles in the yard. There are a total of 30 seats and 70 wheels. How many tricycles are there?  | 15. | 10 | | |
| **16.** | Mark is bending a wire 12 inches long. What is the biggest area rectangle he can build from this wire? | 16. | 9 [$in^2$] | | |

TURN PAGE

| | | | | | |
|---|---|---|---|---|---|
| **17.** | A total of 360 people visited school fair. 1/5 of them were boys, 7/20 were girls and the rest were adults. How many more kids than adults were there? | 17. | 36 [more kids] | | |
| **18.** | This year Mandy's age is between 20 and 50 years and is a multiple of 6. Next year her age will be a multiple of 5. How old is she now? | 18. | 24 [years old] | | |
| **19.** | A mountain climber started his climb on Saturday morning and arrived to his destination the same day at 5 in the afternoon. At 11 in the morning he was one third of his way up. What time did he start the ascension? | 19. | 8 [a.m.] | | |
| **20.** | How many different 3 letter words can you create from the word CHALLENGE, if middle letter is "A"? | 20. | 49 | | |
| **21.** | A jar full of water weighs 3 kilograms. When it is half full then it weighs 2 kilograms. How heavy is the jar? | 21. | 1 [kg] | | |
| **22.** | Three years ago, the sum of the ages of two dogs Sherlock and Pinky was 13 years. Now Pinky is 10 years old. In how many years will Sherlock be 11 years old? | 22. | 2 [years] | | |
| **23.** | What is the area of the largest square that can be cut out of a rectangle with sides 8 cm and 21 cm? | 23. | 64 [$cm^2$] | | |
| **24.** | One gingerbread cookie can be cut out from a square pastry. If six cookies are made from 6 pastries, the remaining parts of those pastries can be used to make one more gingerbread cookie. What is the largest number of gingerbread cookies could be formed when 36 square pastries are rolled? | 24. | 42 [cookies] | | |
| **25.** | If they may touch but not overlap, at most how many squares of an area of 4 can fit inside a rectangle measuring 6 by 14? | 25. | 21 | | |
| | | | **TOTAL SCORE** | | |

Division N – Grade 4

# MATH CHALLENGE TOURNAMENT 2015

## Individual Challenge – Grade 4

Sponsored By Ellipsis Academy

**FINAL SCORE:**

**KEY**

**Name: _____**

**Team#:_____**

***Individual Challenge (30 minutes)***

- You may use scratch papers to do any calculation to reach final answers.
- Write your answers in this test booklet.
- All fraction answers must be reduced.
- Unit is not necessary. If you choose to label your answer, please make sure you write the correct unit. A correct answer with incorrect unit will be marked as an incorrect answer.

There are 25 questions.

**Correct answer: 5 points**

**Blank answer: 2 points**

**Incorrect answer: 0 point.**