



Kangourou Sans Frontières



Mathematics Promotion Society

Math Kangaroo in USA

# Math Kangaroo 2011 in USA

International Competition in Mathematics

Thursday, March 17, 2011

Levels 1 and 2

*This test consists of 24 questions on 4 pages.*

*You have 75 minutes to complete it.*

*Calculators are not allowed!*

*Please enter your answers on the answer form provided.*

*Please put your name and ID number on the line below.*

### 3 Point Problems

1. Consecutive positive numbers were placed in the cells of the table below. What number is missing from the middle cell?

1	2	?	4	5
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A) 0                                      B) 1                                      C) 3                                      D) 6

2.  $6 + 2 =$

A) 5                                      B) 6                                      C) 7                                      D) 8

3. Sharon had 10 dolls. She gave Betty one of her dolls. How many dolls does Sharon have now?

A) 6                                      B) 7                                      C) 8                                      D) 9

4. There are 2 boys and 2 dogs and nobody else on the playground. How many legs are there on this playground?

A) 12                                      B) 10                                      C) 8                                      D) 4



5. Which month sometimes has only 29 days?

A) January                              B) February                              C) March                              D) April

6. 7 students and a teacher are ready for a snack. There are 7 glasses of milk, 8 candy bars and 1 cup of coffee ready for them. Each student will have the same snack. How many candy bars will the teacher get with his coffee?

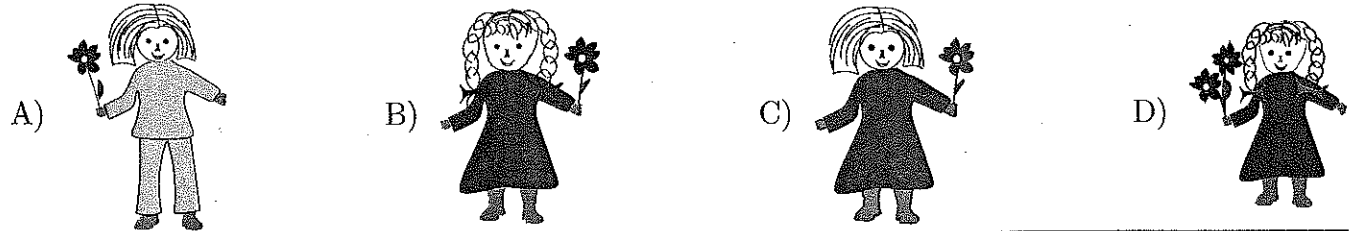


A) 0                                      B) 1                                      C) 2                                      D) 3

7. What is the sum of the digits in the number 2011?

- A) 202                                      B) 31                                      C) 4                                      D) 13

8. Katie's doll is wearing a dress, has two braids and is holding one flower in her hand. Which picture shows Katie's doll?

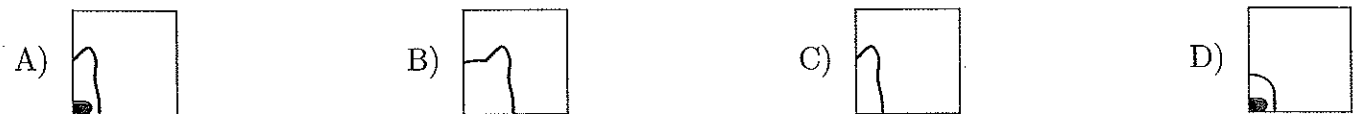
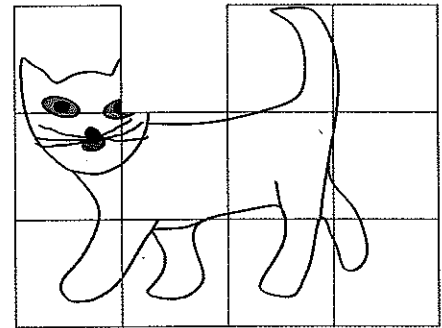


#### 4 Point Problems

9. At the end of the skiing season, there were 12 pairs of ski boots left at the store. How many ski boots counted one-by-one were left at the store?

- A) 6                                      B) 12                                      C) 24                                      D) 4

10. The picture below shows a puzzle with one piece missing. Which of the pieces below needs to be added to the puzzle in order for it to make a picture of a cat?



11. Today is 3/12/2011. No item can be sold after the date shown below it. Which of the items cannot be sold?



- A) 9/15/2011                      B) 3/4/2012                      C) 7/11/2011                      D) 2/25/2011

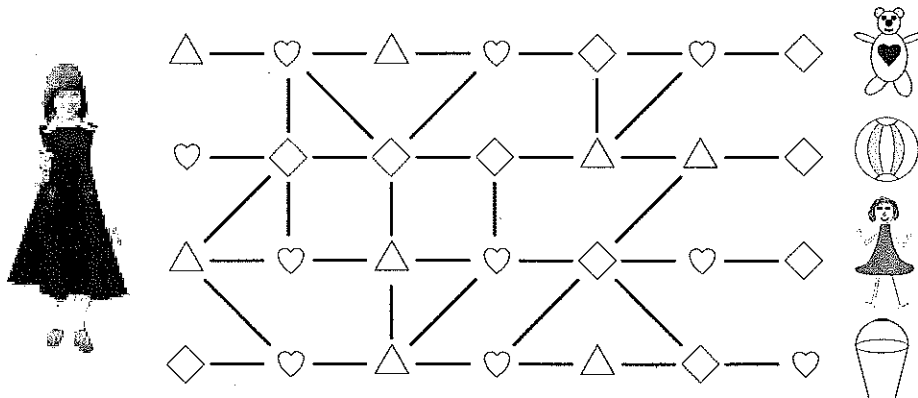
12. In 36 years, Mark's grandmother will celebrate her 100th birthday. How old is Mark's grandmother now?

- A) 74                                      B) 64                                      C) 66                                      D) 36

13. Anne has several dogs and 4 cats. The number of her cats' ears is equal to the number of her dogs' paws. How many dogs does Anne have?

- A) 8                                      B) 2                                      C) 4                                      D) 6

14. To find her toy, Marie needs to follow the path which is marked by the following signs in this order:  $\triangle$ ,  $\heartsuit$ ,  $\diamond$ ,  $\triangle$ ,  $\heartsuit$ ,  $\diamond$ ,  $\triangle$ ,  $\heartsuit$ ,  $\diamond$ . Which toy belongs to Marie?



- A) B) C) D)

5 Point Problems

15. The picture below shows part of a train schedule. Right now, it's 8:45. Mr. Smith will go from Chicago to Indianapolis on the next train. The trip will take 2 hours and 45 minutes. What time will Mr. Smith arrive in Indianapolis?

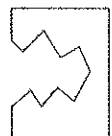
CHICAGO – Departures					
INDIANAPOLIS	6:55	8:30	9:15	11:15	12:50

- A) 11:30 B) 12:00 C) 11:15 D) 12:15

16. Katie bought three identical pencils, two identical pens and two identical erasers, and paid \$11.60. Hannah bought one pencil, two pens and two erasers, and she paid \$8.40. How much does one pencil cost?

- A) \$1.20 B) \$1.50 C) \$1.60 D) \$3.20

17. Natalie folded a piece of paper in half and cut out a shape, as shown in the picture to the right. Which of the pictures below shows the piece of paper after it was unfolded?



- A) B) C) D)

18. Mr. and Mrs. Taylor have three daughters. The youngest is 5 years old. The middle daughter is 4 years younger than the oldest daughter and 6 years older than the youngest daughter. How old is the Taylors' oldest daughter?

- A) 10 B) 11 C) 9 D) 15

19. The flowers in the flower shop were kept in three vases. There were 16 flowers in the first vase, 11 flowers in the second vase, and 17 flowers in the third vase. The owner decided to sell only bouquets of 5 flowers each. After selling some bouquets, she noticed that she did not have enough flowers to make another bouquet. How many flowers did she have left?

- A) 1                                      B) 2                                      C) 3                                      D) 4

20. Simon has two identical aquariums. There are 26 quarts of water in one, and 42 quarts of water in the other. How many quarts of water does Simon need to pour from the second aquarium into the first in order to have the same amount of water in both?

- A) 6                                      B) 16                                      C) 10                                      D) 8

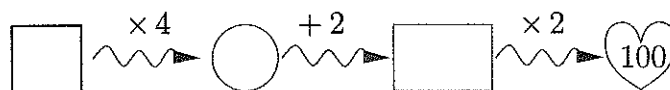
21. Fido the Dog, Philemon the Cat and 4 monkeys together weigh 24 lbs. Fido and one monkey together weigh 11 lbs. Philemon and 2 monkeys together weigh 1 lb less than Fido and one monkey weigh together. Each of the monkeys weighs the same. How much does Philemon weigh?

- A) 3 lbs                                      B) 4 lbs                                      C) 5 lbs                                      D) 6 lbs

22. Anita, Clara, Michael and Daniel had an apple eating contest. The person who ate the most apples won. Daniel ate more apples than Clara, and Michael ate fewer apples than Anita. We also know that Daniel did not win. Who ate the most apples?

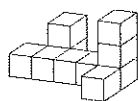
- A) Anita                                      B) Clara                                      C) Michael                                      D) We cannot know.

23. What number do we need to put in the first square in order to get 100 as the result after doing all the operations shown below?

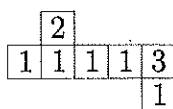


- A) 11                                      B) 9                                      C) 14                                      D) 12

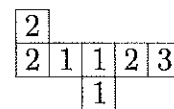
24. Paul and Jon were building using identical cube blocks. Paul made the building shown in Picture 1. Picture 2 shows Paul's building as seen from above. Picture 3 shows Jon's building as seen from above. (Note: The numbers in each square indicate how many blocks are placed one on top of another in that place.) Which of the answers shows Jon's building?



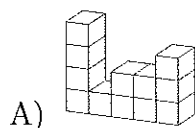
Picture 1.



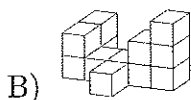
Picture 2.



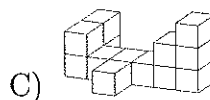
Picture 3.



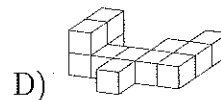
A)



B)



C)



D)

