

2005



wizKID

EUROPEAN KANGAROO ARITHMETIC AND MATHEMATICS CONTEST

Welcome to the Kangaroo, great that you join in!

- * You have 50 minutes. There are 24 questions. With every question one of the five options is the correct one.
- * Do what you can, don't be disappointed if you cannot answer everything.
- * You are not allowed to use a calculator; of course you may use scribbling paper.
- * Use a pencil to fill in the answer sheet carefully.
- * About scoring points:
 - * You start with 30 free points.
 - * Question 1 - 10: you will get 3 points for a correct answer; you will lose $\frac{3}{4}$ points for an incorrect one.
 - * Question 11 - 20: you will get 4 points for a correct answer; you will lose 1 point for an incorrect one.
 - * Question 21 - 24: you will get 5 points for a correct answer; you will lose $1\frac{1}{4}$ points for an incorrect one.
 - * If you don't answer a question, you neither gain nor lose points.
- * The answers will be on the website from March 22nd, www.math.ru.nl/kangoeroe
- * The scores and the prizes will arrive at schools in week 17.

Good luck and most of all: have fun!!

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the Netherlands: 5 & 6 primary school
Flanders: 3 & 4 primary school

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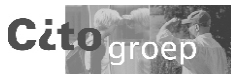
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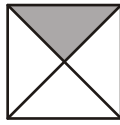


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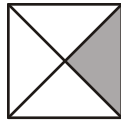
01. Meryl bought some cookies. Each cookie costs 3 euro. She payed the lady at the counter with a 10 euro note and she got 1 euro change. How many cookies did Meryl buy?

- A. 2 B. 3 C. 4 D. 5 E. 7

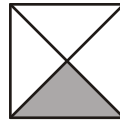
02. Tim has a square sheet of paper in front of him and he turns it seven times. The following figures show you how Tim started and the position of the square after the first turn and after the second turn.



start



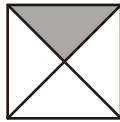
after the first turn



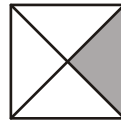
after the second turn

What is the position of the square after seven turns?

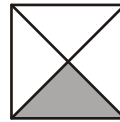
A.



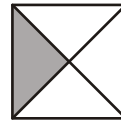
B.



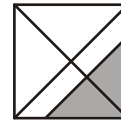
C.



D.



E.



03. Complete.

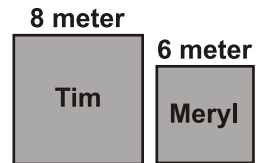
$$205 - 25 = 130 +$$



Which number should replace the kangaroo?

- A. 50 B. 60 C. 100 D. 180 E. 310

04. Tim and Meryl each have a square garden. They both build a fence around their garden. How many more metres than Meryl does Theo need for his fence?

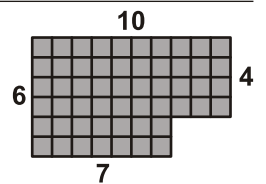


- A. 2 B. 4 C. 6 D. 8 E. 10

05. Tim lives with his father, mother and sister. They also have a dog, two cats, two canaries and four goldfish. How many legs do they have altogether?

- A. 13 B. 22 C. 24 D. 28 E. 32

06. Meryl has a big chocolate bar. She has eaten a few squares already. How many squares are left?



- A. 48 B. 52 C. 54 D. 56 E. 60

07. Tim is fetching some water for his turtle. He needs four full buckets. Each time when he returns from the tap he loses half the water from his bucket. How many times does Tim have to fill his bucket?

- A. 2 B. 4 C. 6 D. 8 E. 10

08. Four friends weighing 80 kg, 80 kg, 80 kg and 60 kg want to use the elevator to go up. The lift can't carry more than 150 kg. How many times does the elevator have to go up to carry all friends?

- A. 1 B. 2 C. 3 D. 4 E. 7

09. In a circus all monkeys are neatly in six rows. Each row has four monkeys. At the blow of a whistle the monkeys will regroup in eight rows. How many monkeys will be in each row now?

- A. 1 B. 2 C. 3 D. 4 E. 5

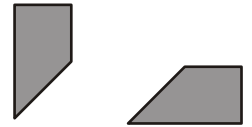
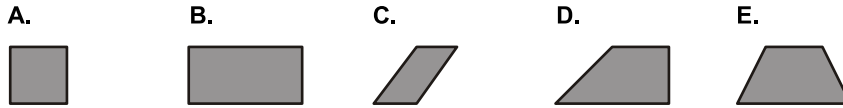
10. Meryl has to choose one of the following five numbers. All digits have to be different. The third digit has to be more than the first digit. Which number does Meryl have to choose?

- A. 3216 B. 3824 C. 4383 D. 4874 E. 5263

3 points



11. A square sheet of paper is cut in three pieces. Two pieces are shown here. What is the third piece?



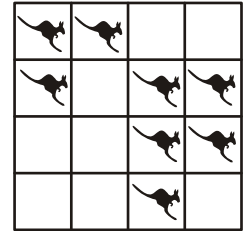
12. Tim has cut a sheet of paper in three pieces. And after that he has cut one of those pieces in three again. How many pieces of paper does he now have altogether?

- A. 4 B. 5 C. 6 D. 7 E. 9

13. A number of children are lined up. Tim is number 24 in line. Meryl is number 66. Harry is midway between Tim and Meryl. What is his number in the line?

- A. 33 B. 35 C. 42 D. 45 E. 90

14. We want two kangaroos in each row (from left to right and from top to bottom). We want to move the least number of kangaroos possible. How many kangaroos will be moved?



- A. 1 B. 2 C. 3 D. 4 E. 5

15. In the boot of a car are five trunks. In each trunk are three boxes. In each box are ten golden coins. The boot, the trunks and the boxes are all locked. You are allowed to open 8 locks. How many golden coins can you take?

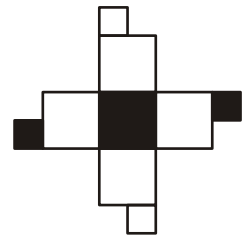
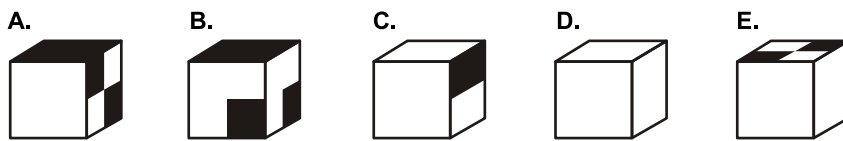
- A. 40 B. 50 C. 60 D. 70 E. 80

16. Garfield and Tom are cats, Pluto and Lassie are dogs. Garfield is afraid of either dog. Tom is afraid of Lassie, but Pluto is his friend. What is **not** true?

- a. Each cat is afraid of at least one dog.
 b. There is a cat that isn't afraid of any of the dogs.
 c. There is a dog that scares both cats.
 d. Each dog scares at least one cat.
 e. There isn't a dog that is friends with both cats.

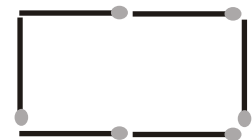
- A. a B. b C. c D. d E. e

17. The net alongside is folded into a cube. Which cube could you get?



18. Every rectangle which you can make with six matches has the same shape. Have a look at the picture. Now you have to make a rectangle out of 14 matches. How many different shapes can have that rectangle?

- A. 2 B. 3 C. 4 D. 6 E. 12

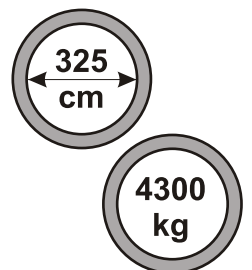


19. Seven kangaroos have been eating nuts, each of them ate the same number of nuts. The total number of nuts eaten is a three-digit number. The first digit is 3 and the last digit is 0. So the number is: 3□0. Which digit should be placed in the box?

- A. 5 B. 6 C. 7 D. 8 E. 9

20. Approaching a bridge you see two traffic signs. Four trucks want to cross the bridge. They shouldn't be wider or heavier than the traffic signs say. Which truck may cross the bridge?

- A. The truck that is 315 cm wide and weighs 4307 kg.
 B. The truck that is 322 cm wide and weighs 4298 kg.
 C. The truck that is 325 cm wide and weighs 4400 kg.
 D. The truck that is 330 cm wide and weighs 4250 kg.
 E. You can't tell.

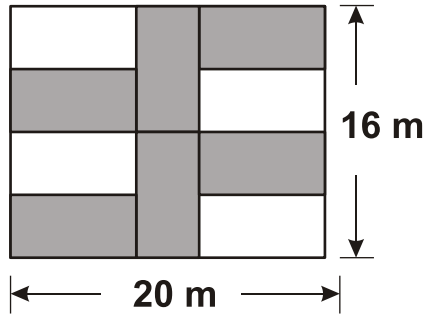


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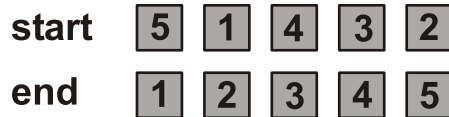
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21. A garden measures 16 m by 20 m. The gardener planted flowers in six equal fields. Those are the grey pieces in the figure. The gardener is about to put a hedge around one of the fields.



How many metres of hedge does he need?

- A. 20 B. 22 C. 24 D. 26 E. 28
-
22. Meryl writes down a three-digit number. She also writes down a two-digit number. She subtracts the numbers and finds 989 for outcome. What will be the outcome when she adds the numbers?
- A. 1000 B. 1001 C. 1009 D. 1010 E. 2005
-
23. Five cards are placed in a row, as shown at start. You have to get them in the right order, as shown at end. The way to do this is by interchanging two cards repeatedly.



How many times do you have to do this? (the least number of times possible)

- A. 1 B. 2 C. 3 D. 4 E. 5
-
24. In the picture you can discover seven squares.
How many triangles can be discovered in the picture?

- A. 4 B. 5 C. 7 D. 8 E. 10

