

2007



WIZSMART

www.math.ru.nl/kangoeroe

EUROPESE KANGOEROE
REKEN- EN WISKUNDEWEDSTRIJD

**Good luck
and most of
all have fun!**



calculator not allowed



you may use 50 minutes



of course scrap paper is allowed



results and awards at school at the end of April



20st March the answers will be on the website

wizSMART
the Netherlands:
7 & 8 primary school and 1 & 2 vmbo
vmbo 3 & 4 basisberoepsgerichte leerweg
Flanders: 5 & 6 primary school and bso 1st degree

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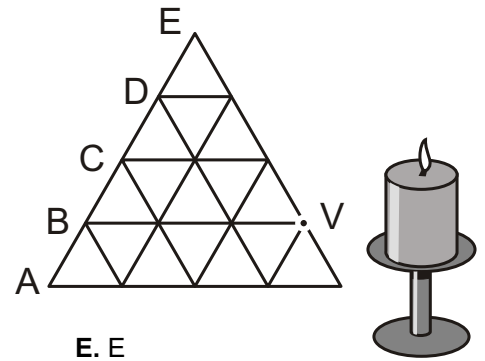
www.kijk.nl

2007



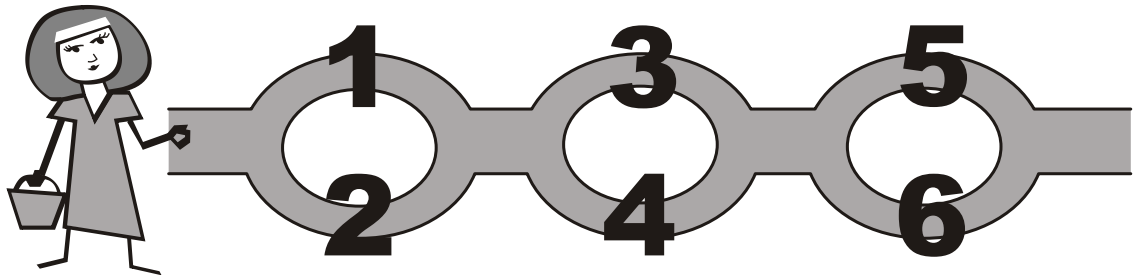
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1. A network of ropes is shown on the right. The rope catches fire at position V. All pieces of rope burn equally fast. Which point does the fire reach last?



- A. A B. B C. C D. D E. E

2. Sophie walks from left to right.



Which numbers could she encounter?

- A. 1, 2 and 4 B. 1, 2 and 5 C. 1, 5 and 6 D. 2, 3 and 4 E. 2, 3 and 5

3. Sophie is 10 years old now. Her mother is 4 times as old. How old will her mother be when Sophie is two times as old as she is now?

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

4. It takes a kangaroo 6 seconds to make 4 jumps. How many seconds does it take the kangaroo to make 10 jumps?

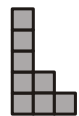
- A. 10 B. 12 C. 15 D. 18 E. 20

5. In the puzzle shown, you have to fill in the digits 1, 2, and 3. In every row from left to right there should be a 1, a 2 and a 3. Also, in every row from top to bottom there should be a 1, a 2 and a 3. Daan has started filling in numbers already. How many solutions are there?

1		
2	1	

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

6. Out of two pieces you should make one rectangle. One of the pieces is shown on the right. Which of the following pieces do you also need?

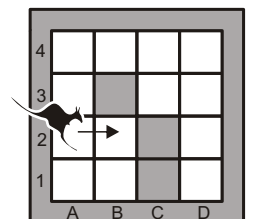


- A. B. C. D. E.

7. At 7.30 a.m., Daan sent a carrier pigeon to Sophie. The pigeon arrived at 9.10 a.m. at Sophie's. The pigeon flies a distance of 4 km in 10 minutes. How far apart do Daan and Sophie live from each other?

- A. 14 km B. 20 km C. 40 km D. 56 km E. 64 km

8. A kangaroo starts jumping at square A2. He jumps in the direction of the arrow. He will always jump forward until he meets a barrier. Then he turns right. If it is impossible to turn right, he stops. The grey squares and the borders of the board are barriers. At which square does the kangaroo stop?



- A. A1 B. B2 C. C3 D. D1 E. the kangaroo never stops

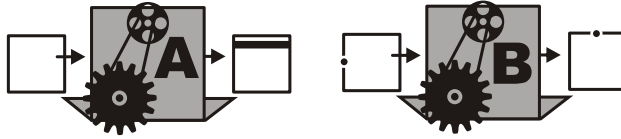
3 points



9. A cube measuring 1 by 1 by 1 meter is cut up in small cubes of 1 by 1 by 1 dm. The small cubes are piled up. How high will the pile be at most?

- A. 10 m B. 100 m C. 1 km D. 10 km E. 1000 km

10. A printing office has two machines, A and B. Machine A draws a line from left to right, and machine B turns the paper around, see the figure below.



A clean sheet of square paper is put through both machines. Afterwards, the paper looks like this:



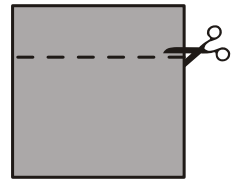
In what order was the paper put through the machines?

- A. ABB B. BA C. BAB D. BABBB E. BBA

11. Daan has written down a 2-digit number. Sophie writes down that number again after the first. This way she makes a 4-digit number. Sophie's number is times as big as Daan's number.

- A. 10 B. 100 C. 101 D. 1000 E. 1001

12. A piece of square paper with a perimeter of 20 cm has been cut in two by Sophie. Both pieces are rectangles. One of the rectangles has a perimeter of 16 cm. What is the perimeter of the other rectangle?

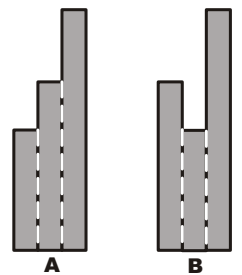


- A. 8 cm B. 9 cm C. 12 cm D. 14 cm E. 16 cm

13. Anna, Britt, Carlijn and Dine all take part in different sports. These sports are: karate, soccer, volleyball and judo. Anna does not like ball games. Judoka Britt often watches soccer games. What **could** be true?

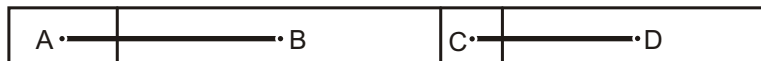
- A. Anna plays volleyball B. Anna does judo C. Britt plays soccer
D. Carlijn plays volleyball E. Dine does karate

14. Sophie has 3 planks. They are all 10 cm wide. The planks have lengths of 50 cm, 75 cm and 100 cm. Sophie puts them down in two ways. By how many cm does the perimeter of way A exceed the perimeter of way B?



- A. 0 B. 20 C. 25 D. 40 E. 50

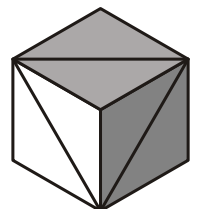
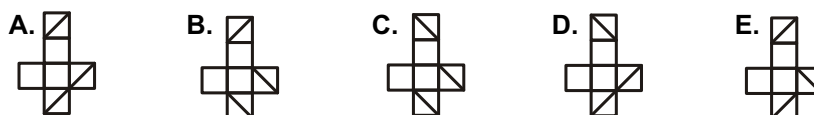
15. Sophie has divided a strip of paper of 27 cm into four rectangles. The rectangles are not of the same size. In the picture, the centre of each rectangle is indicated, with one of the letters A, B, C, and D. Now Sophie draws two lines, one from A to B and one from C to D.



What is the combined length of these lines?

- A. 12 cm B. 13,5 cm C. 14 cm D. 14,5 cm E. 15

16. The cube shown can be assembled from a net. Which one?

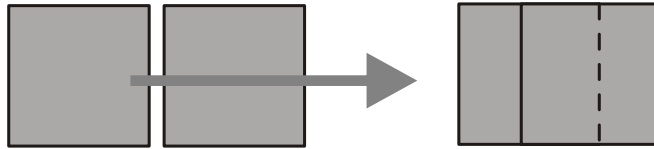


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17. Two 9 by 9 cm squares partly overlap. The square on the right lies on top of the square on the left, as the picture shows. This way they form a 9 by 13 cm rectangle together.

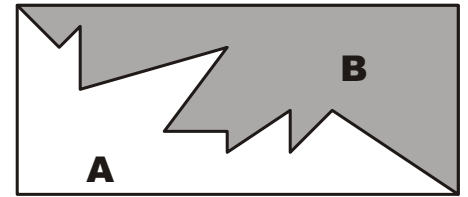


What is the area of the overlapping part?

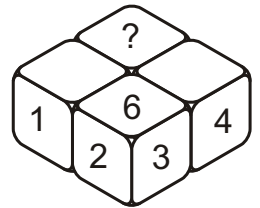
- A. 36 cm^2 B. 45 cm^2 C. 54 cm^2 D. 63 cm^2 E. 72 cm^2
18. 60 birds are sitting in 3 trees. Suddenly, 6 birds fly away from the first tree. Then 8 birds from the second tree and 4 from the third tree fly away too. Now there are an equal number of birds in all trees. How many birds were sitting in the second tree at first?

- A. 18 B. 20 C. 21 D. 22 E. 24

19. A rectangle is divided into two pieces, A and B. (as shown) Which statement is certainly true?



- A. The perimeter of A is smaller than that of B.
B. A and B have the same perimeter.
C. The perimeter of A is greater than that of B..
D. A and B have the same area.
E. The area of A is greater than that of B.
20. On dice, the numbers of dots on opposite faces always add up to 7. We glue together 4 identical dice. Faces that are glued together have the same number of dots on them. You can see the numbers of dots on some faces. How many dots are there on the face with the question mark?



- A. 1 B. 2 C. 3 D. 4 E. 5
21. What is the 2007th letter of KANGOEROEKANGOEROEKANGOEROE.....?
- A. E B. G C. K D. N E. O

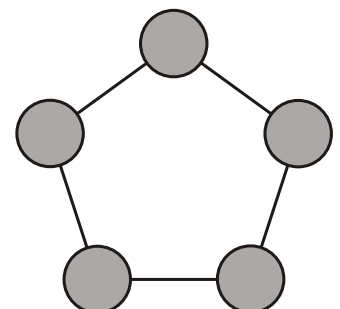
22. Daan was born on January 1, 2002. Daan is 1 year minus 1 day older than Sem. When was Sem born?

- A. December 31, 2000 B. January 2, 2001 C. December 31, 2002
D. January 1, 2003 E. December 31, 2003

23. Daan thinks of a whole number. Sem multiplies this number by 5 or 6. Thomas adds 5 or 6 to Sem's answer. Finally Milan subtracts 5 or 6 from that answer again. His answer is 73. Which number did Daan have in mind?

- A. 9 B. 10 C. 11 D. 12 E. 14

24. In this cycle five whole numbers are written. If you add two or three numbers that are next to each other, you can never divide the answer by 3. How many of these five numbers themselves can you divide by 3?



- A. 0 B. 1 C. 2 D. 3 E. You cannot tell.

5 points