wizSMART 2011

W4 KANGOEROE
WereldWijde
WiskundeWedstrijd

www.w4kangoeroe.nl

Good luck and most of all have fun.

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calculator not allowed

you may use 50 minutes

scrap paper is allowed

results and awards at school mid-May

23th March the answers will be on the website

20th April the explanations will be on the website

wizSMART
7 & 8 primary school and 1 & 2 vmbo,
vmbo 3 & 4 basisberoepsgerichte leerweg

1. Emma paints the word KANGOEROE. Every day she paints one letter.
She starts on Wednesday.
On which day does Emma paint the last letter?

A. Monday   **B.** Tuesday   **C.** Wednesday   **D.** Thursday   **E.** Friday

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2. Omar cycled 14 km in 30 minutes.
What was his average speed in km/h?

A. 7   **B.** 14   **C.** 28   **D.** 56   **E.** 44

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3. Carlo cuts a square in two pieces, in one go.
Which shapes could these pieces have?

A. two squares   **B.** rectangle and triangle
C. square and rectangle   **D.** two triangles
E. square and triangle.

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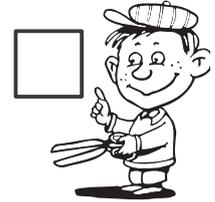
4. Sonia has to write the word WISKUNDE in the table. She may start wherever she wants to.
But the next box has to border the previous box (by a side or a corner).
Which table cannot be made by Sonia?

A.
W	I
S	E
D	K
N	U

B.
W	I
S	K
D	E
U	N

C.
D	E
W	N
U	I
K	S

D.
S	K
I	U
W	N
D	E

E.
W	E
I	D
N	S
U	K

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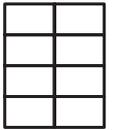
5. Sonia takes four signboards from the left and puts them to the right.
She does this in such a way that the sum on the right is correct.

17   167   30   49   96
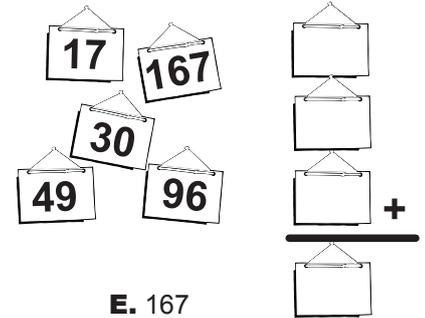
Which number remains on the left?

A. 17   **B.** 30   **C.** 49   **D.** 96   **E.** 167

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6. The structure shown has to become a block.
Which piece do you need?

A.   **B.**   **C.**   **D.**   **E.**

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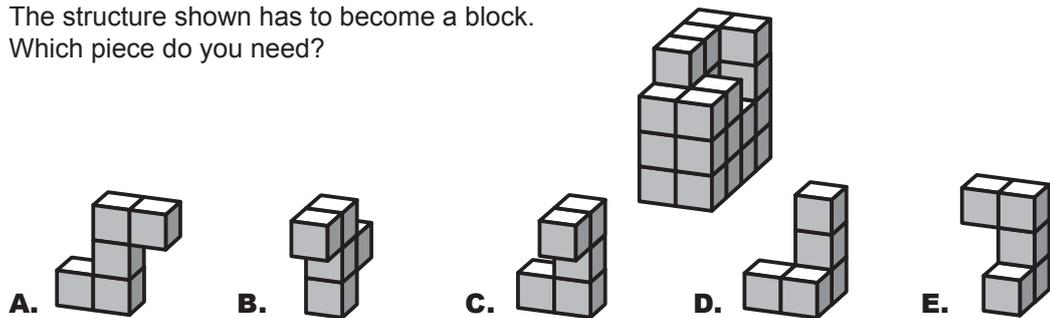
7. Emma pours 60 litres of water in the top tube.
At every fork the same amount of water flows each way.
How many litres of water end up in tub B?

A. 30   **B.** 35   **C.** 40   **D.** 45   **E.** 50

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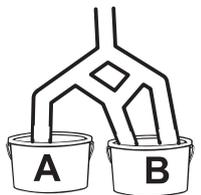
8. A hamster walks through tunnels to Never-never land The hamster
doesn't walk through the same tunnel twice and
does not pass the same crossing twice.
There are 16 nuts; see picture.
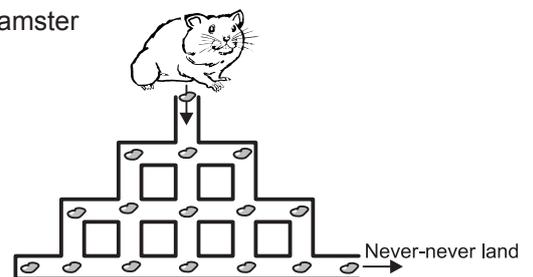
What is the largest number of nuts the hamster can eat?

A. 11   **B.** 12   **C.** 13   **D.** 14   **E.** 15

9. If cat Minny lazes all day, she drinks 60 ml of milk. If she catches mice, she drinks one third more milk.
Over the past two weeks she has been catching mice on the Saturdays and Sundays.
How much ml of milk did cat Minny drink over the past two weeks?

A. 440 **B.** 840 **C.** 920 **D.** 1040 **E.** 1120

10. In Omar's street there are only houses on one side. They all have odd numbers.
The first house has number 1.
The houses with a digit 3 in their house numbers all have a front garden; the others don't have one.
Omar lives in the fifteenth house without a garden.
What is the number of Omar's house?

A. 29 **B.** 41 **C.** 45 **D.** 47 **E.** 49

11. A square tiled floor is made of white and black tiles.
In the picture you see floors with 4 and with 9 black tiles.
There is a black tile on every corner.
Around each black tile there are only white tiles.
How many white tiles do you need for a floor with 16 black tiles?
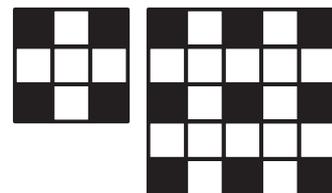
A. 25 **B.** 33 **C.** 36 **D.** 49 **E.** 64

12. Carlo puts the four cardboard pieces together.

Which shape is impossible to get?

A.

B.

C.

D.

E.
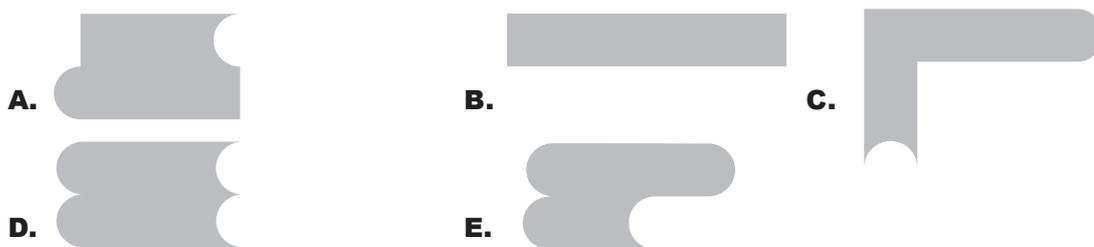
13. Omar wanted to multiply a number by 201. But instead he multiplied it by 21. His answer was 420.
What should his answer have been?

A. 2010 **B.** 4002 **C.** 4020 **D.** 4200 **E.** 40200

14. In a football tournament Omar's club scored three goals to one.
The club won one match, drew one and lost one as well.
What was the score of the match that was won?

A. 1-0 **B.** 2-0 **C.** 2-1 **D.** 3-0 **E.** 3-1

15. Emma and Omar are playing a game. Taking turns they put a black piece on the board,
neatly on the boxes. Each piece may be placed on each open spot.
Right now there are two pieces on the board.
There are still five pieces left and it is Emma's turn.
If she puts the right piece on the board, she will win, because then Omar can't
place another piece.
Which piece should Emma put on the board?

A. **B.** **C.** **D.** **E.**
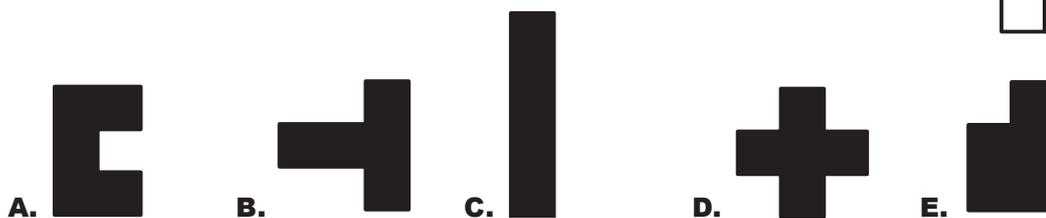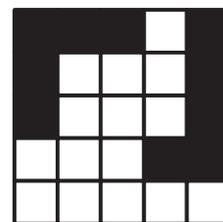
16. There are 10 pupils in a class. The teacher has 80 sweets.
She gives each girl the same number of sweets and she has three sweets left over.
How many boys are in the class?

A. 1 **B.** 2 **C.** 3 **D.** 5 **E.** 7

17. At each of all eight points should be one of the numbers 1, 2, 3 or 4.
Both ends of every line should have different numbers.
At three points a number is written already.
How many times will the number 4 be there?

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

18. We are looking for dates that can be written using three consecutive odd numbers.
For example: the date 1 March 2005 can be written as 1 – 3 – 5
and the date 7 September 2011 can be written as 7 – 9 – 11.
How many of such dates are there between 1 January 2000 and 1 January 2020?

A. 5 **B.** 6 **C.** 8 **D.** 13 **E.** 16

19. Emma used 16 equal cubes to make a square border. Part of it is shown in the picture. Emma wants to fill in the area inside that border with equal cubes. How many more cubes does she need?

A. 9 **B.** 16 **C.** 25 **D.** 36 **E.** 49

20. Sonia writes down all four- digit numbers that have exactly the same digits as 2011
(so two 1's, one 0 and one 2). She lists them from small to large.
Sonia looks for the number that goes immediately before 2011 and the number that comes immediately after 2011.
When she adds those two numbers she gets:

A. 2033 **B.** 3221 **C.** 3302 **D.** 3311 **E.** 3320

21. In the middle of a sheet of paper of 28 by 32 cm a grey cross has been drawn.
The cross consists of four equal rectangles.

How many cm² is the area of the cross?

A. 112 **B.** 120 **C.** 166 **D.** 224
E. 240

22. In a certain month there were 5 Saturdays and 5 Sundays.
There were only 4 Fridays and only 4 Mondays too.
Which day will be 5 times in the next month?

A. Wednesday **B.** Thursday **C.** Friday **D.** Saturday **E.** Sunday

23. On a dice two opposite faces always have seven spots together.
Three dice are on top of each other.
In this pile there are two pairs of faces touching each other.
For each pair the total amount of spots is five. On the bottom dice you can see 1 spot.
How many spots are on the top of the pile?

A. 2 **B.** 3 **C.** 4 **D.** 5 **E.** 6

24. Omar wants to lay a square(without holes) using pieces as shown alongside.
How many of these pieces does he need at least?

A. 8 **B.** 10 **C.** 12 **D.** 16 **E.** 20