wizSMART 2008

EUROPESE KANGOEROE REKEN- EN WISKUNDEWEDSTRIJD

www.math.ru.nl/kangoeroe

Good luck
and most of
all have fun.

calculator not allowed

you may use 50 minutes

scrap paper is allowed

results and awards at school at the end of May

15th April the answers will be on the website

23th April the explanations 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

3 points

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1. Which answer is smallest?

A. 2 x 0 x 0 x 8 = **B**. 20 + 0 – 8 = **C**. 2 + 0 + 0 + 8 = **D**. 200 : 8 = **E**. 200 – 8 =

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2.  = 2 × 2 × 3 × 3

What is  ?

A. 2 **B**. 3 **C**. 4 **D**. 6 **E**. 9

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3. The computation 1 + 1 ♥ 1 – 2 = 100 is correct.
What does ♥ have to be?

A. x **B**. – **C**. + **D**. 0 **E**. 1

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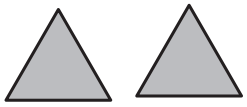
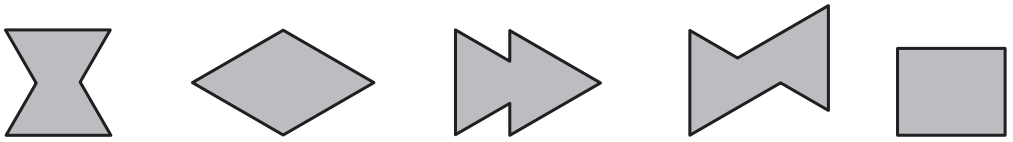
4. Elsie uses the two triangles alongside to make all kind of shapes.
The triangles may overlap a bit.
Which of the following shapes is impossible for Elsie to make?





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

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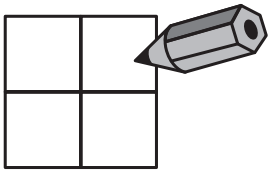
5. One number will be written in every box.
The numbers are 2, 3, 4 and a secret number.
If you add the numbers in the top row, you will get 9.
If you add the numbers in the bottom row, you will get 6.
What is the secret number?



A. 4 **B**. 5 **C**. 6 **D**. 7 **E**. 8

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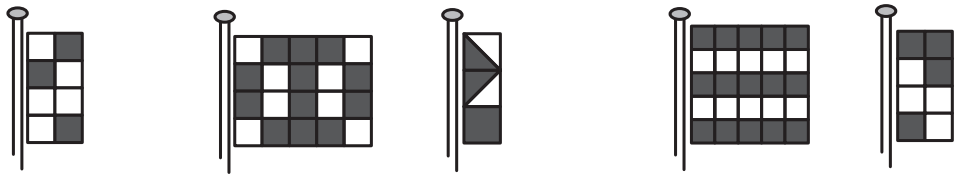
6. Of the following flags, how many are three-fifths black?



A. 0 **B**. 1 **C**. 2 **D**. 3 **E**. 4

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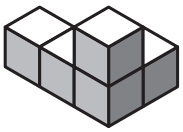
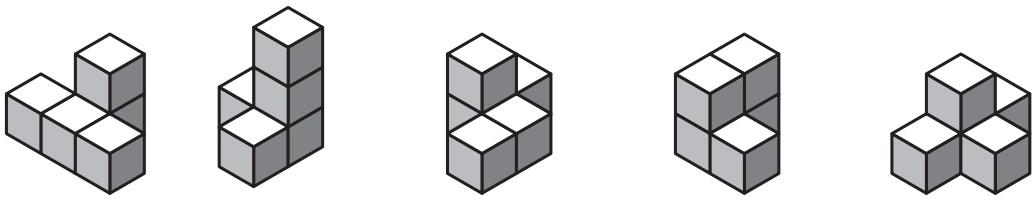
7. Alongside there is a construction made out of five little cubes. You are allowed to move exactly one little cube. The construction may be turned around.
Which of the following constructions is impossible to make this way?





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

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8. The figure shows two tables of multiplication.
One of them is incomplete.
Which number should replace the question mark?

×	4	3
5	20	15
7	28	21

×		
	35	63
	30	?

A. 36 **B**. 42 **C**. 54 **D**. 56 **E**. 65

9. Fiona made some snowballs. She now joins a snowball fight.
During the fight she makes 17 more snowballs and she throws 21 snowballs.
After the fight Fiona has 15 snowballs left.
How many snowballs did she make before the fight?

A. 18 **B**. 19 **C**. 23 **D**. 33 **E**. 53

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10. Gerard puts a number of matches on the table, making the ends meet.
This way he forms a triangle.
With how many matches will Gerard fail to do this?

A. 3 **B**. 4 **C**. 5 **D**. 6 **E**. 7

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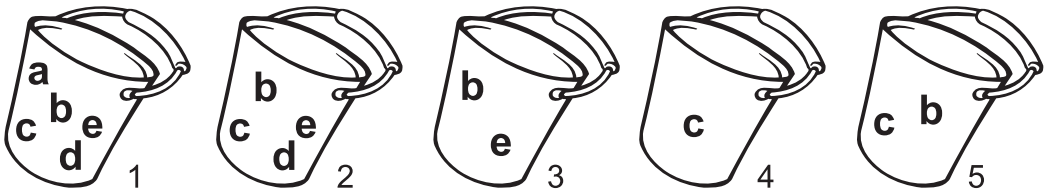
11. Below you see five buckets with letters. Alex gets letters out of the buckets.
He would like to keep one letter in every bucket.
These have to be five different letters.
Which letter remains in bucket 2?



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

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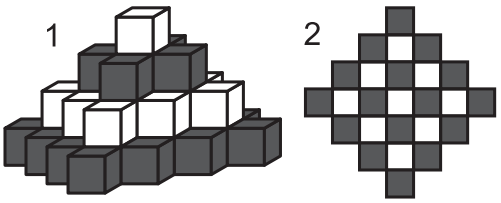
12. Figure 1 shows a construction consisting of white and black stones.
Every layer consists of one single colour.
Figure 2 shows the building right from above.
How many white stones does the building contain?



A. 9 **B**. 10 **C**. 12 **D**. 13 **E**. 14

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13. Ismael wants to put all of his CDs in one rack.
There is no room for one third of his CDs. These CDs he puts in three small cases.
Each case will store 7 CDs, but then there are still 2 CDs left.
How many CDs does Ismael have?

A. 21 **B**. 23 **C**. 46 **D**. 63 **E**. 69

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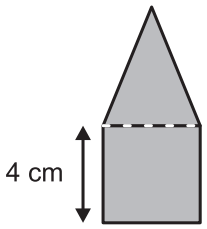
14. A square and a triangle together form a pentagon.
The square and the triangle have the same perimeter.
What is the perimeter of the pentagon in cm?



A. 12 **B**. 24 **C**. 28 **D**. 30 **E**. 32

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15. Around a round table 60 chairs are arranged.
A number of children are sitting around this table.
Nowhere two empty chairs are next to each other.
What is the least number of children for which this is possible?

A.10 **B**. 20 **C**. 30 **D**. 40 **E**. 50

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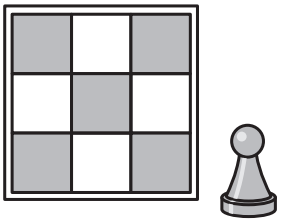
16. You want to move a pawn across this board.
The pawn has to be at every square exactly once.
You may only move the pawn horizontally (↔) or vertically (↕).
Starting at which squares will you be able to manage?

A. Only at the central square **B**. At a corner square
C. At a white square **D**. At a gray square
E. At every square



5 points

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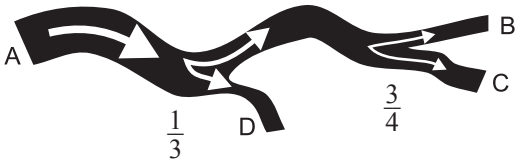
17. A river starts in A and flows to the right. At the first fork $\frac{1}{3}$ of the water flows to D. At the second fork $\frac{3}{4}$ flows to C. See the figure to the right.
Which part of all the water flows to B?



A. $\frac{1}{6}$ **B**. $\frac{1}{4}$ **C**. $\frac{1}{2}$ **D**. $\frac{2}{3}$ **E**. $\frac{11}{12}$

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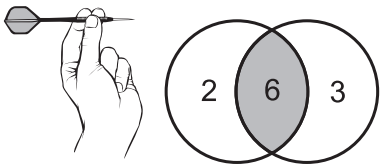
18. Hafidi throws two darts at the special dartboard shown.
If she misses the board altogether she scores 0 points.
How many different scores can Haifidi get?



A. 4 **B**. 6 **C**. 8 **D**. 9 **E**. 10

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19. The five signs represent five different digits.
✤ + ✤ + ✤ = ✪ ✦ + ✦+ ✦= ✹ ✪ + ✹ = ✖
What digit is ✖ ?

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

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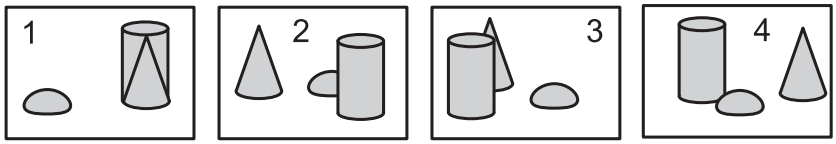
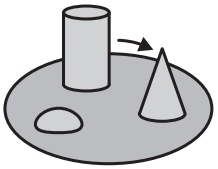
20. A park contains 3 statues. Petra walks around the park.
She starts at the arrow. On her way, she takes four pictures.





In which order did she take the pictures?

A. 2134 **B**. 2143 **C**. 2431 **D**. 3214 **E**. 4213

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21. A box contains seven cards. The cards are numbered 1 through 7. Gerard takes three cards at random. Then Hafida takes two cards. There are two cards left in the box now. Gerard can tell from the numbers on his cards that the sum of the two numbers on Hafida's cards has to be even.
What is the sum of the numbers on Gerard's cards?

A. 6 **B**. 9 **C**. 10 **D**. 12 **E**. 15

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22. The number 200820082008.....20082008 consists of a thousand digits. We would like to erase as many digits as possible, but the sum of the remaining digits should equal 2008.
How many digits could we erase at most?

A. 246 **B**. 254 **C**. 564 **D**. 601 **E**. 746

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23. In 3 years time, Judy will be 3 times as old as 3 years ago.
And in 2 years time Kate will be 2 times as old as 2 years ago.
What must be true?

A. Judy and Kate have the same age
B. Judy is 1 year older than Kate
C. Judy is 2 years older than Kate
D. Kate is 1 year older than Judy
E. Kate is 2 years older than Judy

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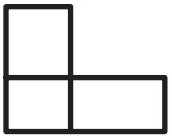
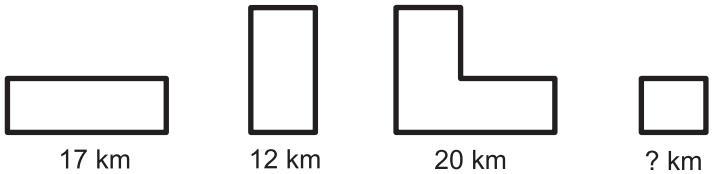
24. To the right a town map is shown. There are four routes of different lengths.





How many kms is the fourth route?

A. 5 **B**. 8 **C**. 9 **D**. 12 **E**.1 5

Tick the answer you think will be answered *best* and tick the one you think will be answered *worst*.