wizSMART 2022



Good luck and most of all have fun.!

- calculators are not allowed
- you may use 50 minutes
- Only a pencil, an eraser and scribbling paper are allowed
- results and prizes will arrive at school at the end of May
- answers will be posted on the website about March 29th
- solutions will be posted on the website about April 20th

wizSMART
vmbo 1 & 2
vmbo 3 & 4 basisberoepsgerichte leerweg

zwijsen
Breng leren tot leven
www.zwijsen.nl

NEMO
www.e-nemo.nl

Texas Instruments
www.education.ti.com

SMART GAMES
www.smart.be

Schoolsupport
www.schoolsupport.nl

ID Premiums Relatiegeschenken b.v.
Relatiegeschenken & Promotieartikelen
www.idpremiums.nl

math play
www.mathplay.eu

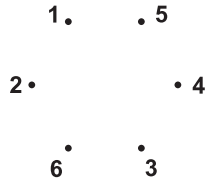
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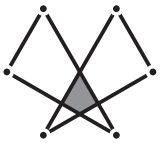
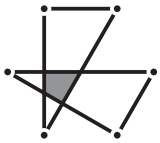
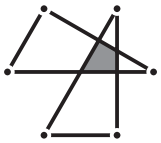
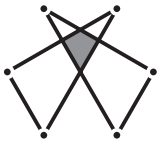
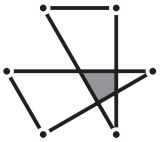
platform wiskunde nederland
www.platformwiskunde.nl

Museum Boerhaave Sinds 1931
www.museumboerhaave.nl

1. In the picture above you see 6 dots.
Maaike connects the even-numbered dots, which creates a triangle.
Then *Maaike* also connects the odd-numbered dots, which creates a second triangle.



Which figure does *Maaike* get?

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

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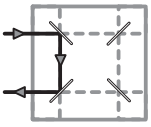
2. In a shop marbles are packaged in bags of 5, 10 and 25 marbles per bag.
Tom wants to buy exactly 95 marbles.

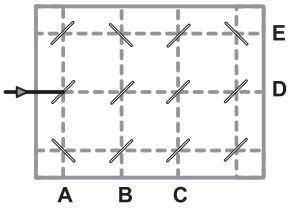
What is the smallest number of bags he has to buy?

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

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3. The mirrors reflect a laser beam as shown in the picture on the left.



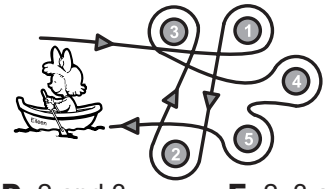


At which letter does the laser beam come out of the picture?

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

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4. *Eileen* sails with her boat around 5 buoys, see picture.

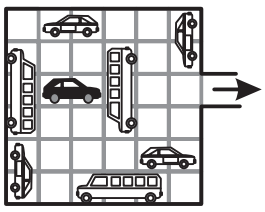


Around which buoys is she sailing counterclockwise?

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

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5. There are a number of vehicles in a garage, see picture on the right.
The vehicles can only move forward or backward.



What is the smallest number of vehicles you must move so that the black car can get out?

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

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6. *Bodil* arranges these 7 cards with numbers in a different order to get the smallest possible 12 digit number.

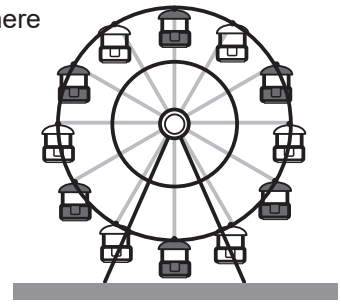
4	69	113	9	51	5	67

What are the last 3 digits of this number?

A. 113 **B.** 459 **C.** 679 **D.** 699 **E.** 967

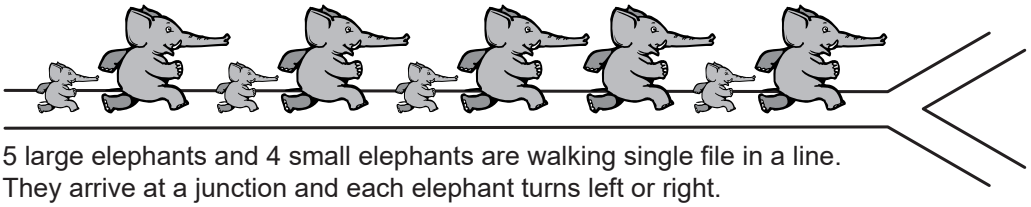
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7. Which part of a whole turn does the Ferris wheel have to rotate so that there is a white wagonat the top?



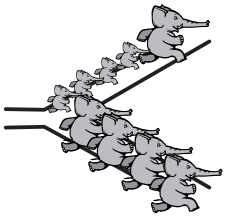
A. $\frac{1}{12}$ **B.** $\frac{1}{6}$ **C.** $\frac{1}{3}$ **D.** $\frac{1}{2}$ **E.** $\frac{5}{6}$

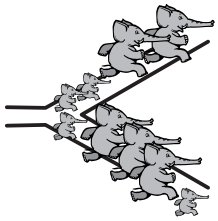
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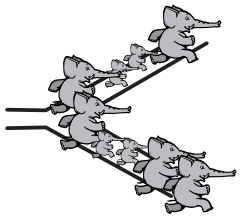


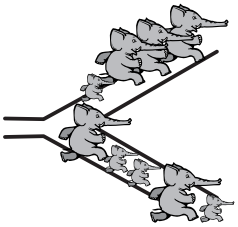
5 large elephants and 4 small elephants are walking single file in a line.
They arrive at a junction and each elephant turns left or right.

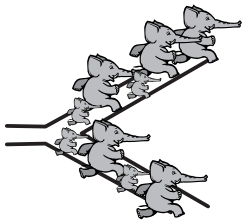
Which situation below is **not** possible?

A. 

B. 

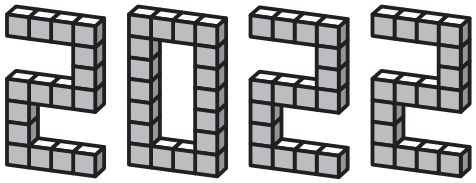
C. 

D. 

E. 

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9. *Masoud* and his friends build the number 2022 with 66 cubes.
Then they paint everything yellow.

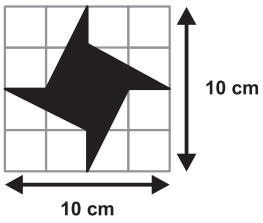


How many cubes have exactly 4 yellow faces?

A. 16 **B.** 30 **C.** 46 **D.** 54 **E.** 60

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10. The area of the square is 100 cm².



What is the area of the black part?

A. 20 cm² **B.** 25 cm² **C.** 30 cm² **D.** 35 cm² **E.** 40 cm²

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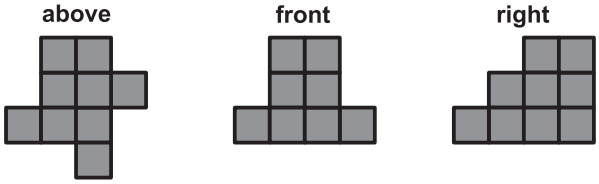
11. The year 2022 is special, because the digit 2 appears three times.
For *Eva* it's the 3rd time in her life that the same digit appears three times in such a year.

At least how old does *Eva* turn in 2022?

A. 18 **B.** 20 **C.** 22 **D.** 23 **E.** 134

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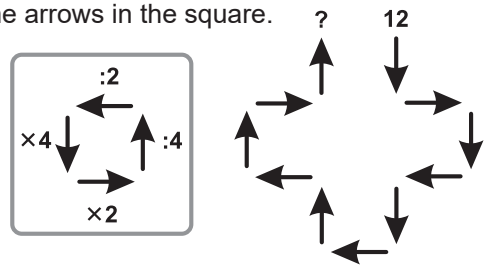
12. *Nick* Nick makes a structure out of cubes.
The figure shows what his structure looks like from the top, front and right side.



What is the largest number of cubes *Nick* could have used?

A. 18 **B.** 19 **C.** 20 **D.** 21 **E.** 22

13. *Clara* starts at the number 12 and follows the arrows.
At each arrow she performs a calculation, according to the arrows in the square.

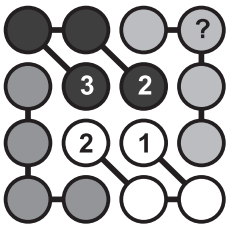


What number will she end up with at the question mark?

A. 3 **B.** 6 **C.** 12 **D.** 24 **E.** 48

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14. Each row, column and set of 4 connected circles must contain the numbers 1, 2, 3 and 4.

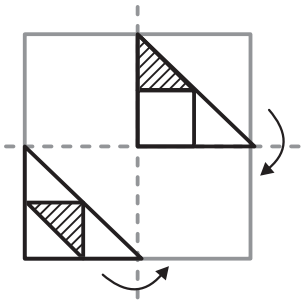


What number has to be in the circle with the question mark?

A. 1 **B.** 2 **C.** 3 **D.** 4 **E.** you cannot know

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15. The diagram shows a transparent piece of paper measuring 4 by 4 cm.
The paper is now folded twice, on each of the dotted lines,
so that a square of 2 by 2 cm is created.

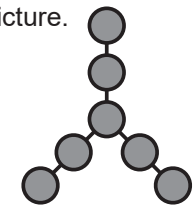


What would the folded piece of paper look like?

A. 
B. 
C. 
D. 
E. 

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16. *Jessi* writes the numbers 3, 4, 5, 6, 7, 8 and 9 in the circles, as shown in the picture.
The sums of the three numbers in each line are equal.

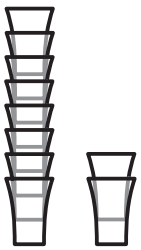


What is the greatest possible outcome?

A. 16 **B.** 18 **C.** 20 **D.** 22 **E.** 28

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17. Several glasses are stacked on top of each other, as shown in the picture.
The stack of 8 glasses is 42 cm tall. The stack of 2 glasses is 18 cm tall.



How tall is a stack of 6 glasses?

A. 22 cm **B.** 24 cm **C.** 28 cm **D.** 34 cm **E.** 40 cm

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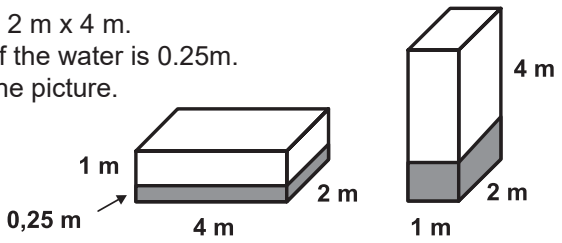
18. *Werner* makes calculations by writing a number in each box.
He always chooses four out of the numbers 2, 3, 4, 5 and 6.
He always makes sure that the calculation is correct.



How many of the five numbers could he write in grey box?

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

19. *Simon* has a water tank with dimensions 1 m x 2 m x 4 m.
In the left picture you can see that the height of the water is 0.25m.
Simon turns the tank on its side, as shown in the picture.

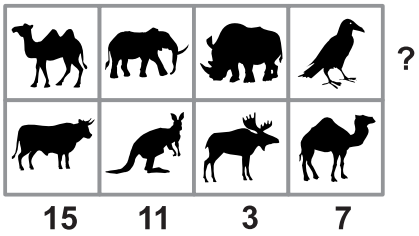


What will the height of the water be now?

A. 0,25 m **B.** 0,50 m **C.** 0,75 m **D.** 1 m **E.** 1,25 m

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20. In the picture you see 8 different animals.
Each animal represents a different integer, greater than 0.
Tamara adds the 2 numbers in each column and writes the result underneath.
Then *Tamara* adds the 4 numbers in the top row.



What is the greatest possible result?

A. 18 **B.** 19 **C.** 20 **D.** 21 **E.** 22

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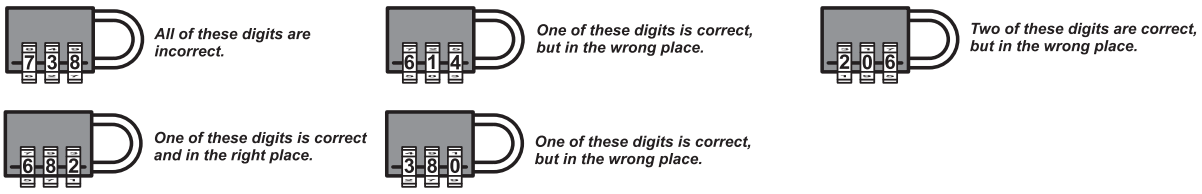
21. There are 4 villages in a straight line in the order *A*, *B*, *C* and *D*.
The distance to the next village is always 10 km.
10 pupils live in village *A*, 20 pupils live in village *B*,
30 pupils live in village *C* and 40 pupils live in village *D*.
The communities want to build a new school together.
They want the total distance pupils have to travel to get to school to be as short as possible.

Where should they build the new school?

A. *A* **B.** *B* **C.** In the middle of *B* and *C.*
D. *C* **E.** *D*

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22. *Hamid* tries to guess a code. He gets 5 hints.



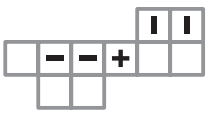
What is the correct code?

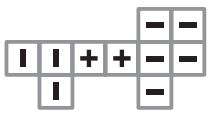
A. 042 **B.** 046 **C.** 082 **D.** 604 **E.** 640

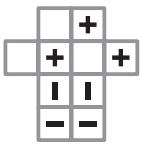
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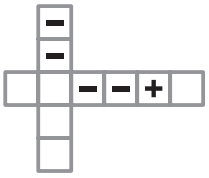
23. Which of the following flat-patterns **cannot** be folded to make the structure in the picture?

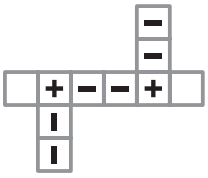


A.


B.


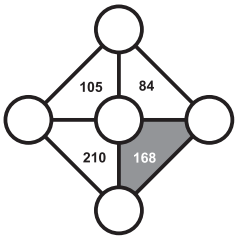
C.


D.


E.


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24. *Selma* writes the numbers 3, 4, 5, 6 and 7 in the five circles in the figure.
Each triangle also contains a number, which is the result when she multiplies the numbers at the three vertices of the triangle.



What is the result if she adds the three numbers at the vertices of the grey triangle?

A. 12 **B.** 14 **C.** 15 **D.** 17 **E.** 18