

**THURSDAY
MARCH 21ST 2024**



© Stichting Wiskunde Kangoeroe

WERELDWIJDE WISKUNDE WEDSTRIJD

WWW.W4KANGOEROE.NL

**GOOD LUCK AND MOST OF
ALL HAVE FUN !**



calculators are not allowed



you may use 50 minutes



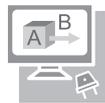
only a pencil, an eraser and scribbling paper are allowed



results and prizes will arrive at school at the end of May

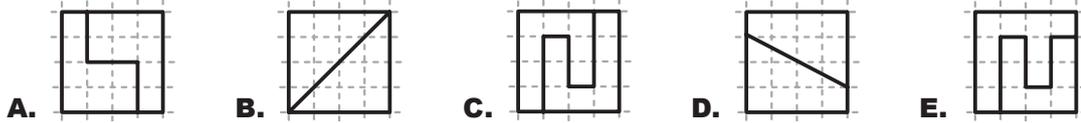


answers will be posted on the website about March 29th

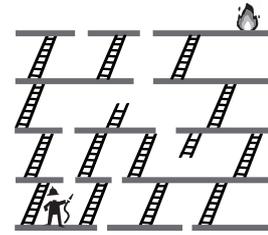


solutions will be posted on the website about April 20th

1. Which square consists of 2 **different** shapes?



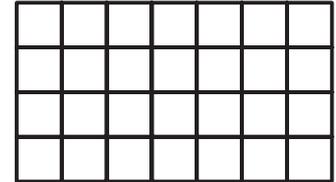
2. What is the smallest number of ladders the firewoman can use to reach the fire without jumping?



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

3. The table consists of 28 white cells. *Ira* paints 2 rows and 1 column.

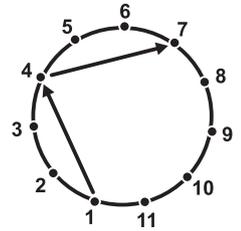
A row is from left to right.
A column is from top to bottom.



How many cells remain white?

- A. 8 B. 10 C. 12 D. 14 E. 17

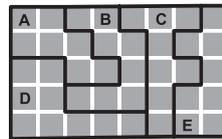
4. Soccer players with numbers from 1 to 11 stand in a circle. The players always kick the ball to the third player on their left. Player 1 starts. This pattern continues until each player has kicked the ball once.



What is the number of the player who kicked the ball last?

- A. 7 B. 8 C. 9 D. 10 E. 11

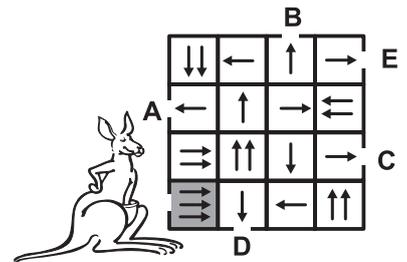
5. There are 5 plots of garden.



Which plot of garden is the largest?

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

6. *Joey* jumps through the maze. The number of arrows in a square determines how far he jumps. A square with 3 arrows means he will jump over 2 squares and land in the third square in the direction of the arrows. *Joey* starts in the grey square.



From which exit will *Joey* come out of the maze?

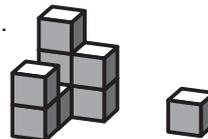
- A. A B. B C. C D. D E. E

7. *Lizzy* pays 7 euros for 3 cars. The cost of each car is different and a whole number.

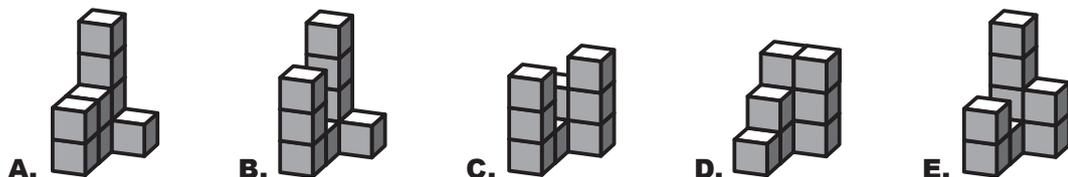
How much does the most expensive car cost?

- A. 2 euros B. 3 euros C. 4 euros D. 5 euros E. 6 euros

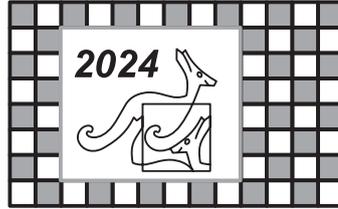
8. A cat knocked off 1 block of *Felix's* construction.



What could this structure have looked like before the block was knocked off?



9. Alex hangs a Kangaroo poster on his kitchen wall with grey and white tiles.



How many grey tiles are behind the poster?

- A. 15 B. 21 C. 25 D. 30 E. 35

10. There are 5 different kinds of fruit in a bowl:



Ann likes .

Ben likes .

Carn likes .

Dan likes .

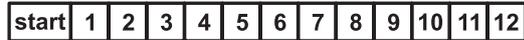
Eli likes .

Everyone gets a fruit they like.
Everyone gets a different kind of fruit.

What does Ben get?

- A.  B.  C.  D.  E. 

11. Antonia and Lucian toss a coin.



If the child sees the grey side, it moves 3 steps forward.
If the child sees the white side, he moves back 1 step.
Both started on start and each tossed the coin 4 times.
Antonia finishes at number 4 and Lucian finishes at number 8.

How many times in total did they see the white side?

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

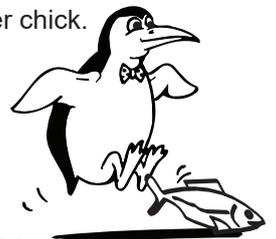
12. Ada has built a tower of 8 discs.
Ada removes the second disc from the bottom of this tower.
Then she removes the third disc from the bottom of the new tower.
Then she removes the fourth disc from the bottom of the new tower.
Then she takes out the fifth disc from the bottom of the new tower.



Which tower does Ada end up with?

- A.  B.  C.  D.  E. 

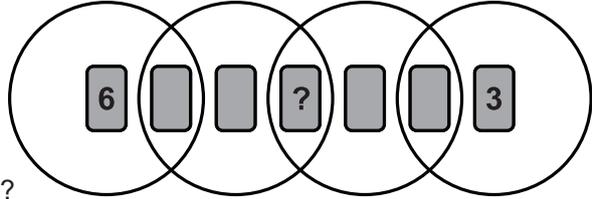
13. Peter the penguin goes fishing every day and brings back 9 fish for his 2 chicks.
Each day, he gives 5 fish to the first chick he sees and he gives 4 fish to the other chick.
Over the last few days one chick has had 26 fish.



How many fish has the other chick had?

- A. 19 B. 22 C. 25 D. 28 E. 31

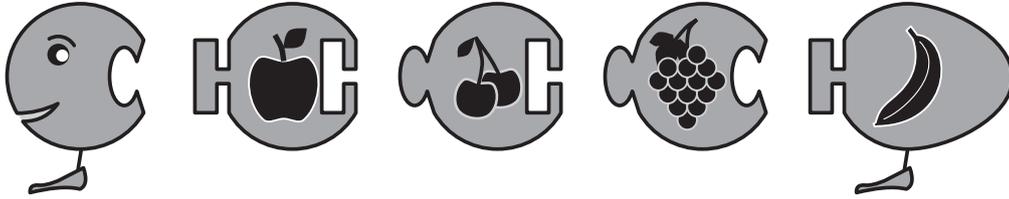
14. 7 cards, numbered from 1 to 7, are placed in 4 overlapping rings. The numbers in each ring add up to 10.



What number is under the question mark?

- A. 1 B. 2 C. 4 D. 5 E. 7

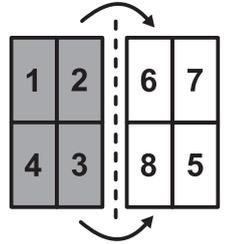
15. Lucas wants to make a caterpillar with a head, a tail and either 1, 2 or 3 puzzle pieces in between.



How many different caterpillars can Lucas make?

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

16. John writes the numbers 1 to 4 on a sheet. Then he flips the sheet and writes down the numbers 5 to 8 as shown in the picture. After that, he cuts the sheet into 4 pieces and puts them in a row:

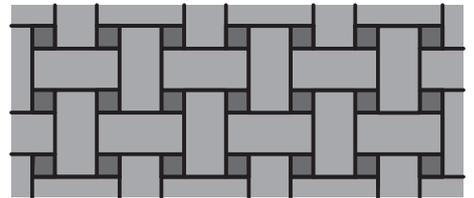


How many are the numbers hidden under the question marks together?

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

17. A floor is made of 2 types of tiles: and .

The rectangles have size 23 cm × 11 cm. The picture shows part of the floor.



What is the side-length of a square tile?

- A. 3 cm B. 4 cm C. 5 cm D. 6 cm E. 7 cm

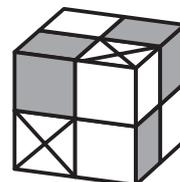
18. 60 children are standing in a row. Each child has a coat and a backpack. The colours of their coats follow this pattern: yellow, green, yellow, green, ... The colours of their back bags follow a different pattern: red, brown, orange, red, brown, orange ...

How many children with a yellow coat have an orange backpack?

- A. 3 B. 4 C. 6 D. 8 E. 10

19. There are 2 types of blocks: white and grey .

A small cube can be made from 4 white blocks or from 1 white and 1 grey block.



What is the smallest number of white blocks needed to make this large cube?

- A. 8 B. 11 C. 13 D. 14 E. 23

20. Each figure represents a digit.
The same figures are the same digits.

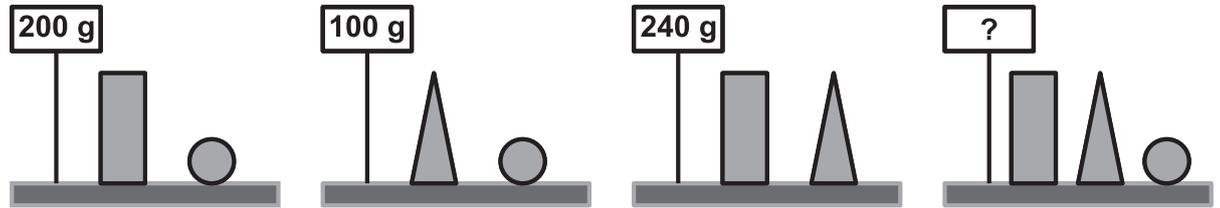
$$\triangle + \triangle = \blacksquare \bigcirc$$

$$\bigcirc + \triangle = \blacksquare \blacksquare$$

What is the result of $\triangle \times \bigcirc \times \blacksquare$?

- A. 6 B. 15 C. 18 D. 28 E. 30

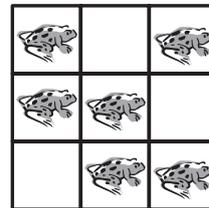
21. Lucy weighs some blocks.



How much do the 3 different blocks weigh together?

- A. 270 g B. 280 g C. 290 g D. 300 g E. 310 g

22. There are exactly 2 frogs in each row and in each column.
A row is from left to right.
A column is from top to bottom.

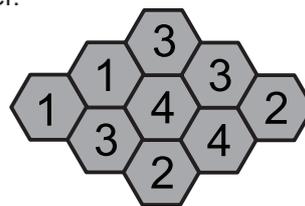


The frogs decide that 2 frogs will jump to an empty square at the same time.
They may only jump to a square directly below, above, left or right of them.
After this, there are still exactly 2 frogs in each row and in each column.

In how many ways can the frogs do this?

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

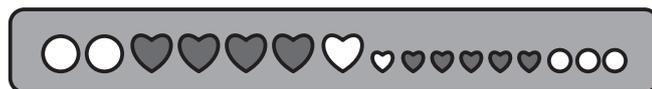
23. In the beehive there are 9 cells.
Some cells contain honey.
The number in a cell indicates how many neighbouring cells contain honey.
Neighbouring cells are attached to each other.



How many cells contain honey?

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

24. 3 girls go one after another to take some cookies from the baking tray.



One of the girls takes all the hearts available on the baking tray.
Another girl takes all the white cookies available on the baking tray.
Yet another girl takes all the big cookies available on the baking tray.
They don't necessarily do it in this order.

One girl takes 3 cookies, one takes 6 cookies and one takes 7 cookies.

Which of the following cookies does one of these girls take?

- A. $\bigcirc \bigcirc \heartsuit$ B. $\heartsuit \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \heartsuit$ C. $\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \heartsuit$
D. $\heartsuit \heartsuit \heartsuit \heartsuit \heartsuit \heartsuit$ E. $\bigcirc \bigcirc \bigcirc$