



**THURSDAY  
MARCH 21<sup>ST</sup> 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 29<sup>th</sup>



solutions will be posted on the website about April 20<sup>th</sup>

wizSMART  
vmbo 1 & 2  
vmbo 3 & 4 basisberoepsgerichte leerweg

**zwijzen**

Breng leren tot leven  
[www.zwijzen.nl](http://www.zwijzen.nl)



[www.e-nemo.nl](http://www.e-nemo.nl)

**FLEXIQ**  
PLAY • ADAPT • GROW

[www.flexiq.nl](http://www.flexiq.nl)



[www.smart.be](http://www.smart.be)

**Schoolsupport** 

[www.schoolsupport.nl](http://www.schoolsupport.nl)

**ID Premiums** Relatiegeschenken b.v.  
Relatiegeschenken & Promotieartikelen  
[www.idpremiums.nl](http://www.idpremiums.nl)



[www.mathplay.eu](http://www.mathplay.eu)

**NUMWORKS**

[numworks.com](http://numworks.com)



[www.ru.nl](http://www.ru.nl)

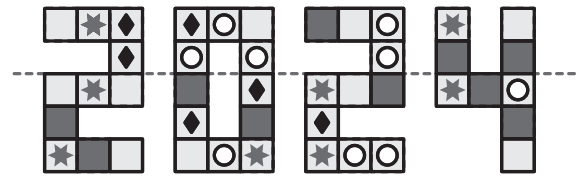
**platform wiskunde nederland**

[www.platformwiskunde.nl](http://www.platformwiskunde.nl)



[www.museumboerhaave.nl](http://www.museumboerhaave.nl)

1. *Eva* folds the image on the right along the dashed line. In one place, 2 of the same squares will end up on top of each other.



What does that square look like?

- A. B. C. D. E.

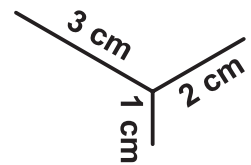
2. *Mia* plays a jumping game and jumps to the next square each time. Each square has a number (see picture).



Which of the following numbers will certainly be one on which *Mia* will land only on her right foot?

- A. 13 B. 15 C. 20 D. 21 E. 23

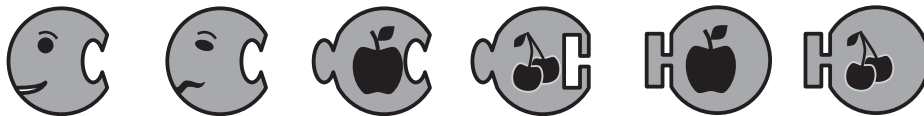
3. Without lifting the pencil, *Djairo* wants to draw the figure on the right.



What is the shortest total length he could draw?

- A. 6 cm B. 7 cm C. 8 cm D. 9 cm E. 10 cm

4. *Emma* has 6 puzzle pieces to make a caterpillar.

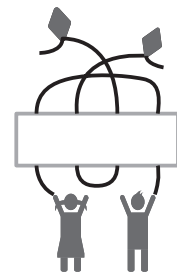


She wants to make a caterpillar with a head, a tail and either 1 or 2 puzzle pieces in between.

How many different caterpillars could she make?

- A. 4 B. 6 C. 8 D. 10 E. 12

5. *Sanne* and *Peter* are flying kites.



Which of the following pictures must you put on the rectangle to make both children fly their kites?

- A. B. C. D. E.

6. In a truck, 6 boxes are piled up as in the picture on the right.

*Martin* puts the boxes on the ground.

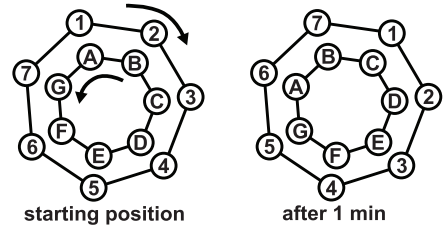
He can only pick one box at a time, on which there is no other box on top of it. He puts a box on the ground or on top of another box.



Which of the following stacks can he **not** make?

- A. B. C. D. E.

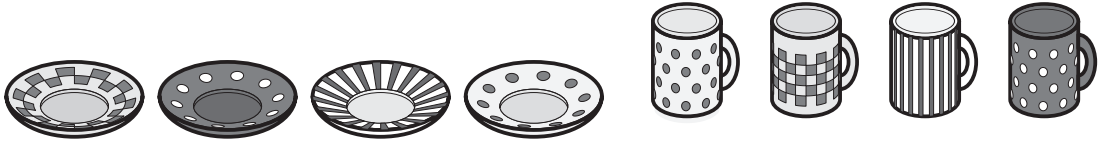
7. The outer wheel rotates clockwise one place per minute.  
The inner wheel rotates exactly one place anti-clockwise per minute (see pictures).



Which number stands in front of the letter F at the moment number 2 is in front of the letter C?

- A. 1                      B. 4                      C. 5                      D. 6                      E. 7

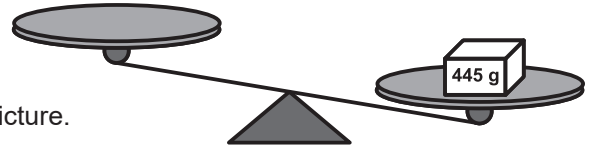
8. Simon takes 4 cups from the cupboard and puts them randomly on the 4 saucers.



Which statement is correct?

- A. It is certain that none of the 4 cups stands on its matching saucer.  
B. It is certain that exactly 1 cup stands on its matching saucer.  
C. It is impossible for exactly 2 cups to stand on their matching saucer.  
D. It is impossible for exactly 3 cups to stand on their matching saucer.  
E. It is impossible for all 4 cups to stand on their matching saucer.

9. Peter has a package of 445 g and the following 8 weights:



He puts the package on the scale, as shown in the picture.

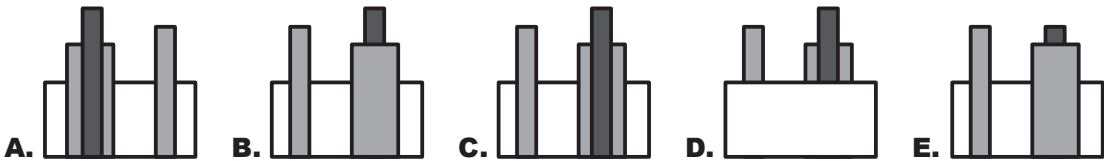
What is the minimum number of weights he needs to balance the scale?

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

10. Dana wonders what this structure looks like from the back when the coloured bars are on the ground.



What is the correct answer?



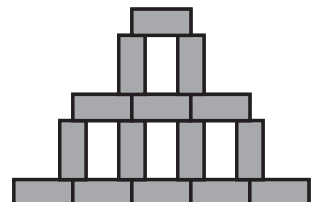
11. In a hotel, the rooms are numbered in ascending order from number 1. Fenna looks at all the numbers and sees 14 times the digit 2 and 3 times the digit 5.



At most how many rooms can there be in the hotel?

- A. 25                      B. 26                      C. 34                      D. 35                      E. 41

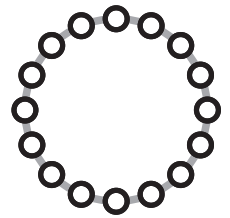
12. Rosa draws a tower of rectangles that are all of the same size. The width of the tower is 45 cm and the height of the tower is 30 cm.



What is the area of 1 rectangle?

- A. 24 cm<sup>2</sup>                      B. 27 cm<sup>2</sup>                      C. 30 cm<sup>2</sup>                      D. 33 cm<sup>2</sup>                      E. 36 cm<sup>2</sup>

- 13.** Darcy has a necklace of 16 beads with numbers on them. The numbers on the beads attached to each other differ by exactly 1. One of the beads shows the number 5 and one of the beads shows the number 13.



How many different numbers are on the 16 beads?

- A.** 9                      **B.** 10                      **C.** 13                      **D.** 14                      **E.** 16

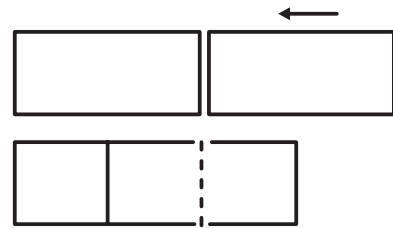
- 14.** Below you can see 8 digits in Braille.



How many different 2-digit numbers are there with exactly 5 black dots?

- A.** 10                      **B.** 12                      **C.** 20                      **D.** 22                      **E.** 24

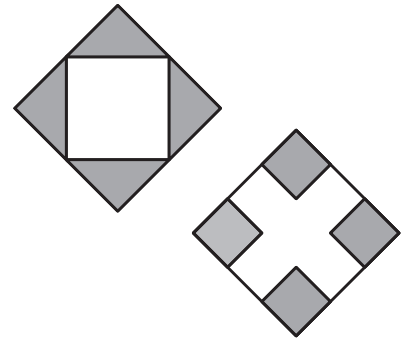
- 15.** Kirsten has 2 identical rectangles. They both have an area of  $18 \text{ cm}^2$ . Kirsten slides the 2 rectangles over each other. The new rectangle has the size of 3 identical squares.



What is the area of this new rectangle?

- A.**  $24 \text{ cm}^2$                       **B.**  $27 \text{ cm}^2$                       **C.**  $30 \text{ cm}^2$                       **D.**  $33 \text{ cm}^2$                       **E.**  $36 \text{ cm}^2$

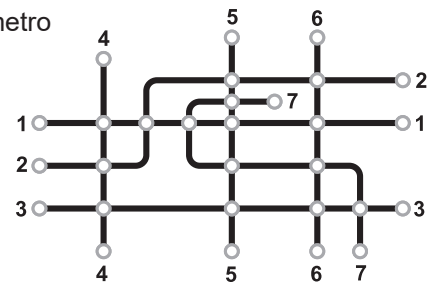
- 16.** There are 2 big squares with the same area. For the first square, the midpoints of each side are used. For the second square you make 4 small squares by dividing each side into 3 equally long parts. The area of the grey part in the first square is 9.



What is the area of the grey part in the second square?

- A.** 4                      **B.** 8                      **C.** 9                      **D.** 10                      **E.** 12

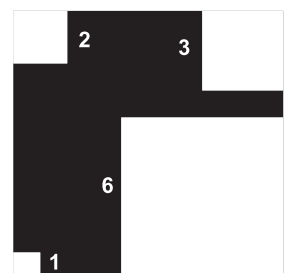
- 17.** The Municipal Council of Kangaroo City wants to colour the 7 metro routes on the map. Routes that cross each other should not have the same colour.



What is the least number of colours they can use?

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

- 18.** Christian has cut 4 small squares from a large square sheet of black paper. The total area of these 4 small cut-out squares is as big as the area of the remaining black figure. The lengths of the sides of the cut-out squares can be seen in the figure.



What is the perimeter of the black figure?

- A.** 36                      **B.** 40                      **C.** 44                      **D.** 48                      **E.** 52

