## WereldWijde WiskundeWedstrijd W4Kangoeroe Thursday March $19^{\text {th }} 2020$



WWW.W4KANGOEROE.NL

## Good luck and most of all have fun.

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calculators are not allowed

only a pencil, an eraser and scribbling paper are allowed

answers will be posted on the website about March $29^{\text {th }}$

you may use 50 minutes

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

solutions will be posted on the website about April $20^{\text {th }}$

Breng leren tot leven

www.e-nemo.nl

## fis Texas

InSTRUMENTS
www.education.ti.com
www.smart.be

Schoolsupport
www.schoolsupport.nl
grekenwinkel ${ }_{\text {gig }}^{\text {g }}$
verstand van school(materialen)
www.derekenwinkel.nl/

EID Premiums

-     - п Relatiegeschenken \& Promotieartikele www.idpremiums.nl

wiskunde nederland www.platformwiskunde.nl
www.museumboerhaave.nl

1. Marie takes a picture of the same mushroom for 5 days.

She starts on Monday.
Which picture did she make on Tuesday?

$B . N$
C. $\mathrm{N} \longrightarrow$ ?

E.

2. Which piece completes the pattern?

A.

B.

C.

D.

E.

3. Greta colours all the rectangles in the grid where the result is 20 .

Which shape does she get?

| $16+4$ | $19+1$ | $28-8$ |
| :--- | :--- | :--- |
| $2 \times 10$ | $16-4$ | $7 \times 3$ |

A.

B.

c.

4. Sjors glues these 6 stickers to the faces of a cube:

D.

E.


The pictures show the cube in 2 positions.


Which sticker is on the opposite face to the cat?
A.


c. 1,1
D. 12
E.
5. Which of the figures below can you make with these pieces?

A.


C.

D.

E.

6. Fatima draws the big square on the pavement with chalk.

She starts jumping from number 1.
Each time she jumps, she jumps to a number that is 3 more than the number she is on.

What is the largest number that Fatima can jump onto?

| 1 | 5 | 8 | 11 |
| :---: | :---: | :---: | :---: |
| 4 | 7 | 10 | 14 |
| 24 | 23 | 13 | 18 |
| 21 | 19 | 16 | 20 |

A. 11
B. 14
C. 18
D. 19
E. 24
7. Which of the following figures has the largest grey part?
A.

B.

C.

D.

E.

8. Cindy colours the 7 regions inside the circle either red, blue or yellow.

She colours neighbouring regions with different colours.
She colours the outer region of the circle red.

How many regions does Cindy colour red?
A. 1
B. 2
C. 3
D. 4
E. 5
9. Loes looks at the pyramid from above.

A.

B.

C.

D.

E.

10. Dennis ties a dog 1 metre from a corner of a shop.

The shop is 7 metres long and 5 metres wide.
The leash is 11 metres long.
Behind the shop there are 5 bones.

How many bones can the dog reach?

A. 1
B. 2
C. 3
D. 4
E. 5
11. Every time the kangaroo goes up 7 steps, the rabbit goes down 3 steps. The staircase has 100 steps.

On which step do they meet?

A. 53
B. 60
C. 63
D. 70
E. 73
12. Farid has 2 types of sticks: short ones, measuring 1 cm and long ones, measuring 3 cm .

Farid wants to make squares with these sticks, such that the ends of the sticks meet.


With which of the combinations below can he make a square, without breaking or overlapping the sticks?
A. with 5 short and 2 long sticks
B. with 3 short and 3 long sticks
C. with 6 short sticks
D. with 4 short and 2 long sticks
E. with 6 long sticks
13. Amalia has 10 of these tokens:

She is building a crown using them.


When 2 tokens share a side, the corresponding numbers match.
Amalia has already placed 4 tokens.

Which number goes in the triangle marked with a cross?

A. 1
B. 2
C. 3
D. 4
E. 5
14. The sum of 3 numbers is 50 .

Karin subtracts a secret number from each of these 3 numbers.
She gets 24,13 and 7 as the results.
Which one of the following is 1 of the original 3 numbers?
A. 9
B. 11
C. 13
D. 17
E. 23
15. Saskia has a normal die.

2 opposite sides always have 7 dots together.


The die is put on a strip of paper and then rolls towards the right.
When the die gets to the last square, what is the total number of dots on the faces marked with the question marks?
A. 6
B. 7
C. 9
D. 11
E. 12
16. Rutmer cuts every key into 3 pieces, each containing 5 grey squares.

Rutmer wants the 3 pieces to have a different shape.
For which key is this not possible for Rutmer?
A.

B.

C.

D.

E.

17. Lonneke builds a fence using 1 metre long poles. The picture shows a fence that is 4 metres long.


How many poles does Lonneke need to build a 10 metre long fence?
A. 25
B. 27
C. 42
D. 45
E. 60
18. 6 people each order 1 scoop of ice cream.

They order 3 scoops of vanilla, 2 scoops of chocolate and 1 scoop of lemon. They top the ice creams with 3 cherries, 2 wafers and 1 chocolate chip.
They use 1 topping on each scoop, such that no 2 ice creams are alike.
Which of the following combinations does not occur?
A. chocolate with a cherry
B. vanilla with cherry
C. lemon with a wafer
D. chocolate with a wafer
E. vanilla with a chocolate chip
19. The Queen tries to find out the 3 names of Rumpelstiltskin's wife.

She asks her:
"Are you called Adele Lilly Cleo?"
"Are you called Adele Laura Cora?"
"Are you called Abbey Laura Cleo?"
Each time exactly 1 name and its position was right.
What is the name of Rumpelstiltskin's wife?
A. Abbey Lilly Cora
B. Abbey Laura Cora
C. Adele Laura Cleo
D. Adele Lilly Cora
E. Abbey Laura Cleo
20. The numbers 1 to 8 are written on the board.

The teacher covered them with triangles, squares and a circle. If you add the numbers covered by triangles the sum is 10 .
If you add the numbers covered by squares the sum is 20 .


Which number is covered by the circle?
A. 3
B. 4
C. 5
D. 6
E. 7
21. Heleen wants to colour the heads, wings and tails of a number of parrots.

She colours each parrot in a different way.
Each parrot gets 3 different colours: red, blue and green.
She colours the head of the first parrot red, the wings green and the tail blue.

How many more parrots can Heleen colour after this?
A. 3
B. 5
C. 6
D. 9
E. 27
22. Several teams came to the summer Kangaroo camp.

Each team consists of 5 or 6 children. There are 43 children in total.
How many teams are at this camp?
A. 4
B. 6
C. 7
D. 8
E. 9
23. Anna replaces letters in $K A N+G A-R O O$ with numbers and then calculates the result.

She can choose numbers from 1 to 9 , where same letters are replaced by same numbers and different letters by different numbers.

What is the largest possible result she can get?
A. 511
B. 933
C. 941
D. 942
E. 948
24. There are some apples and 8 pears in a basket.

Each of these fruits is green or yellow.
There are 3 more apples than green fruits. There are 6 yellow pears.
How many yellow apples are there in the basket?
A. 4
B. 5
C. 6
D. 7
E. 8

