
© Stichting Wiskunde Kangoeroe

calculators are not allowed


Only a pencil, an eraser and scribbling paper are allowed

answers will be posted on the website about March $31^{\text {th }}$


Breng teren tot leven
www.zwijsen.nl

## NESCIENCE MOMUSEUM

www.education.ti.com
keeponplaying
SMART
GAMES
www.smart.be

## Smant

www.sanderspuzzelboeken.nl

## Schoolsupport

www.schoolsupport.n

## Math Plus

www.mathplus.nl

www.hp-prime.nl
-ID Premiums $\qquad$ E. www.idpremiums.n|

www.ru.nl
results and prizes will arrive at school at the end of May
solutions will be posted on the website about April $22^{\text {th }}$

platform
wiskunde nederland www.platformwiskunde.nl

## Denksport

www.denksport.nl

you may use 50 minutes

## SmartPool

www.knbb.nl

1. The Mayans wrote dots and bars for numbers.

A dot was written for 1 , and a bar for 5 .
How did they write the number 17 ?

2. Carrie is going to draw a cat.

The ears and nose are done already (see figure).
Next, she finishes her drawing.

Which of the following drawings could be hers?

A.

B.

C.

D.

E.

3. The numbers 1 through 6 are indicated with dots on an ordinary dice.

If you add the dots on opposite faces, the result you get is always 7 .
Which of the following dice could be an ordinary one?
A.

B.

C.

D.

E.

4. Elise looks at her alarm clock and sees that the time is $20: 19$ (see figure).

At what time will she see the same digits again for the first time?

A.

B.

C.

D.

E.

5. A group of kangaroos celebrates that their ages add up to 36 years.

In 2 years time, they will celebrate that their ages add up to 60 .
How many kangaroos are in this group?
A. 10
B. 12
C. 15
D. 20
E. 24
6. 16 girls and 10 boys are in a kindergarten classroom.

Half the number of children will have to go outdoors.
At least how many girls will have to go outdoors?
A. 1
B. 2
C. 3
D. 4
E. 5
7. Which of the following shapes is not part of the design below?

8.

A. Triangle
B. Square
C. Hexagon
D. Octagon
E. Dodecagon

Laura wants to colour a 2 by 2 square
 red in the figure alongside.


In how many different ways can she do that?
A. 5
B. 6
C. 7
D. 8
E. 9
9. Michae/ wants to paint the buildings below.

Which building needs the most paint?
A.

B.

C.

D.

E.

10. Alvan writes a 3-digit number on each of the 3 pieces of paper. A/van adds the 3 numbers and gets 826 as a result.


What will be the result when she adds the 2 digits that are covered?
A. 7
B. 8
C. 9
D. 10
E. 11
11. Elmas has a dice with on it the 6 smallest odd numbers greater than 0 .

He throws the dice 3 times and adds the numbers
Which of the following results cannot be obtained?
A. 3
B. 19
C. 20
D. 21
E. 29
12. Rick the frog normally eats 5 spiders a day.

On a day when Rick is very hungry, he will eat 10 spiders.
The past 9 days, Rick has eaten 60 spiders in total.
On how many days of those 9 days Rick was very hungry?
A. 1
B. 2
C. 3
D. 6
E. 9
13. Using blocks of 1 cm by 1 cm by 2 cm you can make buildings in the way shown in the figure alongside.


How high will the building be that is made out of 28 blocks?
A. 9 cm
B. 11 cm
C. 12 cm
D. 14 cm
E. 17 cm
14. Pia makes various figures out of connected sticks (see picture).


Which of the following figures cannot be made with these sticks?
A.

B.

C.

D.

E.

15. On each face of the cube alongside, a positive integer is written.


Karel multiplies the numbers on opposite faces.
He always gets the same result.
Now he adds all the numbers on the cube.
What is the least possible result Karel can get?
A. 36
B. 37
C. 41
D. 44
E. 60
16. Alex, Bob and Cees go for a walk every day.

If Alex does not wear a hat, then Bob wears a hat.
If Bob does not wear a hat, then Cees wears a hat.
Today Bob does not wear a hat.
Who does wear a hat today?
A. both Alex and Cees
B. only Alex
E. impossible to know
C. only Cees
D. neither Alex nor Cees
17. 5 paintings are shown in a museum for modern art.

For which painting has been used the most black paint?
A.

B.

C.

D.


18. Robert makes 5 statements; see $\mathbf{A}$. through E.. Exactly 1 of them is not true.

Which statement is not true?
A. My son Basil has 3 sisters.
B. My daughter Anna has 2 brothers.
C. My daughter Anna has 2 sisters.
D. My son Basil has 2 brothers.
E. I have 5 children.
19. Jette and Willy throw balls at 2 identical towers, made out of 15 empty cans. Jette knocks down 6 cans, scoring 25 points in total. Willy knocks down 4 cans.


After Jette's throw.


After Willy's throw.

How many points did Willy score in total?
A. 22
B. 23
C. 25
D. 26
E. 28
20. 6 identical grey marbles and 3 identical white marbles are put on 2 scales (see figure).

A. 90 gram
B. 94 gram
C. 96 gram
D. 99 gram
E. 100 gram
21. In the garden of a witch there are dogs, cats and mice. In total there are 30 animals.

The witch turns 6 dogs into cats. Then she turns 5 cats into mice.
Now there are the same numbers of dogs and cats and mice in her garden.
How many cats were there in the beginning?
A. 4
B. 5
C. 9
D. 10
E. 11
22. Below, 5 nets of a cube are shown. Peter folds each of them into a cube.

On 1 cube the endpoints of the line will meet.
On which cube?
A.

B.

c.

D.

E.

23. Linas makes a large 4 by 4 by 4 cube out of 32 small white and 32 small black cubes of 1 by 1 by 1 . He does this in such a way that as much as possible of the outside is white.

Which part of the outside of the large cube will be white then?
A. $\frac{1}{4}$
B. $\frac{3}{8}$
C. $\frac{1}{2}$
D. $\frac{2}{3}$
E. $\frac{3}{4}$
24. Fatima took selfies with her 8 nieces. Each of the 8 nieces is in 2 or 3 pictures.

Each picture shows Fatima with exactly 5 of her nieces.
How many selfies did Fatima take?
A. 3
B. 4
C. 5
D. 6
E. 7

