

WereldWijde WiskundeWedstrijd
W4Kangoeroe
THURSDAY MARCH
21TH 2019

WWW.W4KANGOEROE.NL

Good luck and most of
 all have fun.

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calculators are not allowed



you may use 75 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 31th



solutions will be posted on the website about April 22th

wizBRAIN
 havo 1, 2 & 3
 vwo 1 & 2
 vmbo 3 & 4 m.u.v. basisberoepsgerichte leerweg.



Breng leren tot leven
www.zwijzen.nl



www.e-nemo.nl



www.education.ti.com



www.smart.be



www.sanderspuzzelboeken.nl



www.schoolsupport.nl



www.mathplus.nl



www.hp-prime.nl



www.idpremiums.nl



www.mathplay.eu



www.ru.nl



www.platformwiskunde.nl



www.denksport.nl

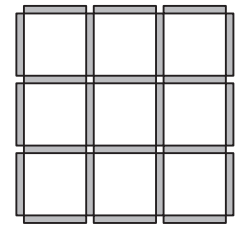


www.museumboerhaave.nl



www.knbb.nl

- 24.** *Thomas* has red, blue, yellow and green sticks, all equally long. With these sticks he lays the figure as shown alongside. He wants to do it in such a way that the four sticks bordering one box are of different colours.



What is the least number of green sticks he needs then?

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

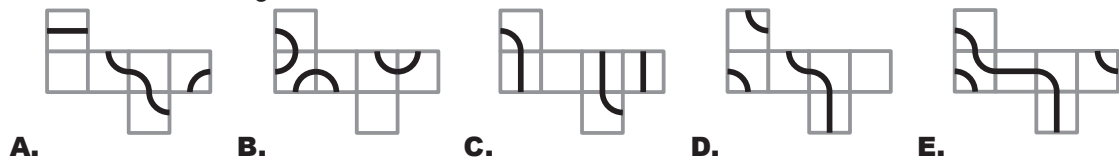
- 25.** *Els* has a box with 60 chocolates. Of this she gives $\frac{1}{10}$ part to *Anton*, then $\frac{1}{9}$ part of the remainder to *Bert*, next $\frac{1}{8}$ part of the remainder to *Carlijn*, then $\frac{1}{7}$ part of the remainder to *Dineke* and so on, until she gives $\frac{1}{2}$ part of what still remains to her last friend.

How many chocolates has *Els* left for herself?

- A.** 1 **B.** 2 **C.** 3 **D.** 4 **E.** 6

- 26.** *Amira* draws a squiggly line on a cube without lifting her pencil off the cube. She stops when her pencil arrives at the starting point with her pencil. After this she unfolds the cube.

Which of the following nets can be of her cube?



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

- 27.** The ratio of the savings of *Petra* and *Shannon* was 5:3. When *Petra* bought a tablet for 160 euros, the ratio changed into 3:5.

What were *Petra*'s savings in euros before she bought the tablet?

- A.** 192 **B.** 200 **C.** 250 **D.** 400 **E.** 420

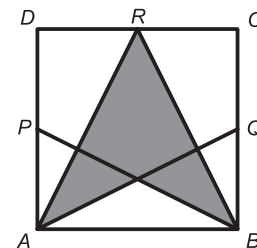
- 28.** A table tennis tournament is being played by teams of three persons. Each player in a team plays exactly once against every player from all the other teams. For organizational reasons no more than 250 games can be played.



What is the largest number of teams that can enter the tournament?

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

- 29.** In square *ABCD* the midpoints of the sides *AD*, *BC* and *CD* are *P*, *Q* and *R*, see figure.



Which part of the square is coloured grey?

- A.** $\frac{3}{8}$ **B.** $\frac{7}{16}$ **C.** $\frac{1}{2}$ **D.** $\frac{5}{8}$ **E.** $\frac{3}{4}$

- 30.** 700 passengers travel on a train of 18 wagons. In any five adjacent wagons are 199 passengers in total.

How many passengers are in the middle two wagons of the train?

- A.** 70 **B.** 77 **C.** 78 **D.** 96 **E.** 103