Lietuvos Respublikos švietimo, mokslo ir sporto ministerija
Kengūros konkurso organizavimo komitetas
Vilniaus universitetas
Lietuvos matematikų draugija

KANGAROO 2021

N

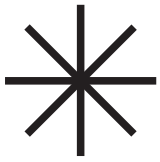
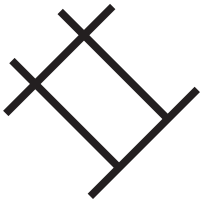
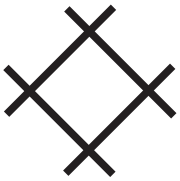
EN

Time allowed: 50 minutes
Calculators are not permitted
The participants solve problems independently

Nipper
1–2 grades

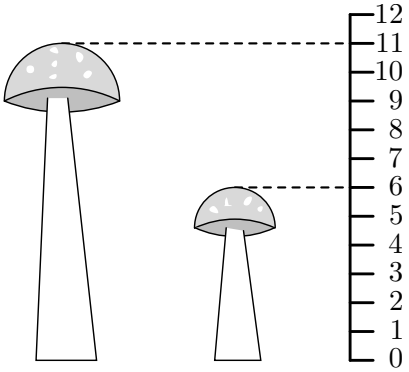
Questions for 3 points

1. A kangaroo laid out 3 sticks like this ——— to make a shape. It is not allowed to break or to bend the sticks. Which shape could the kangaroo make?

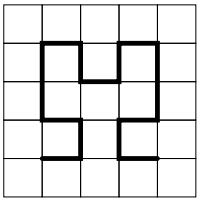
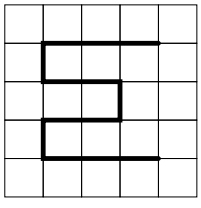
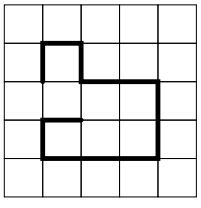
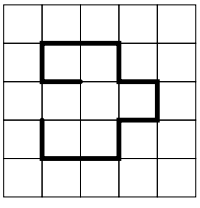
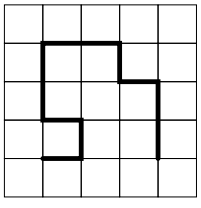
A)  **B)**  **C)**  **D)**  **E)** 

2. The picture shows 2 mushrooms. What is the difference of their heights?

A) 4 **B)** 5 **C)** 6 **D)** 11 **E)** 17

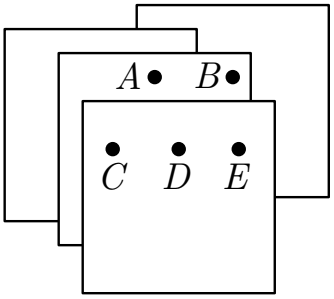


3. Which of the paths shown in the pictures is the longest?

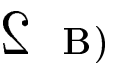
A)  **B)**  **C)**  **D)**  **E)** 

4. Four identical pieces of paper are placed as shown. Michael wants to punch a hole that goes through all four pieces. At which point should Michael punch the hole?

A) A **B)** B **C)** C **D)** D **E)** E



5. Ella puts on this T-shirt and stands in front of a mirror. Which of these images does she see in the mirror?

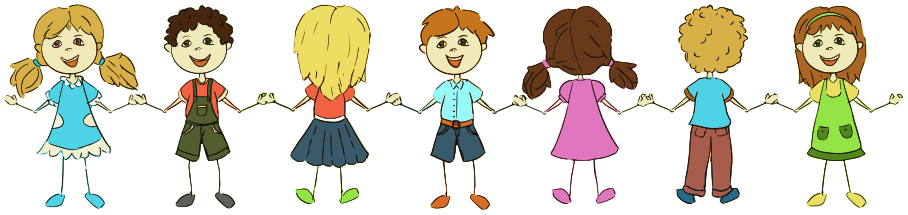
A)  B)  C)  D)  E) 

6. Bananas are more expensive than apples but cheaper than strawberries. Strawberries are more expensive than raspberries but cheaper than grapes. Which fruits are the most expensive?

A) Bananas **B)** Apples **C)** Strawberries **D)** Grapes **E)** Raspberries

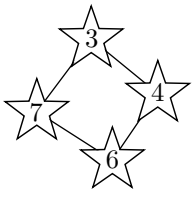
Questions for 4 points

7. Seven children are standing in a line. Some are facing forwards and others are facing backwards. How many children are holding another child's hand with their right hand?

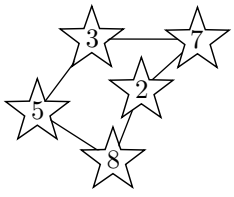


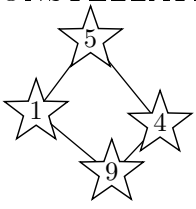
A) 2 **B)** 3 **C)** 4 **D)** 5 **E)** 6

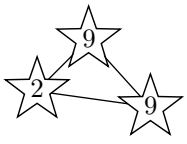
8. In the Kangaroo constellation, all stars have a number greater than 3 and their sum is 20. Which is the Kangaroo constellation?

A) 

B) 

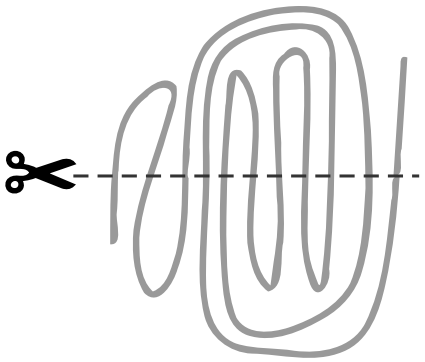
C) 

D) 

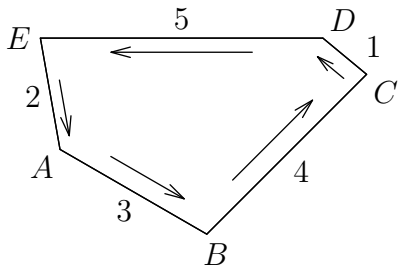
E) 

9. Edmund cut a ribbon as shown in the picture. How many pieces of the ribbon did he finish with?

A) 9 **B)** 10 **C)** 11 **D)** 12 **E)** 13

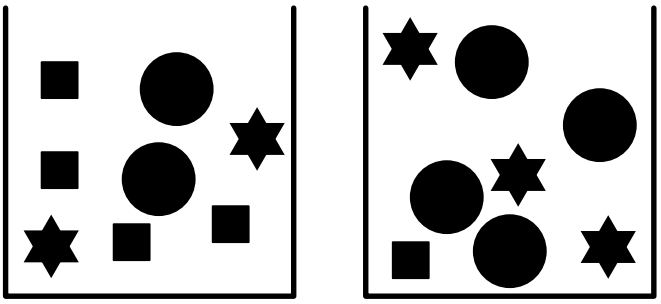


10. Rose the cat walks along the wall. She starts at point B and follows the direction of the arrows shown in the picture. The cat walks a total of 20 metres. Where does she end up?



A) A **B)** B **C)** C **D)** D **E)** E

11. Julia has two glass boxes with figures, as shown. What is the smallest total number of figures Julia has to add to the boxes so that each box has the same number of each type of figures?



A) 2 **B)** 4 **C)** 6 **D)** 8 **E)** 10

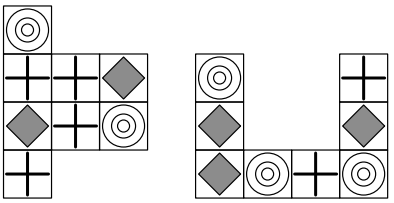
12. Tom encodes words using the board shown. For example, the letter R has the code $C3$, and the word PIZZA has the code $A2\,A4\,C1\,C1\,B2$. What word did Tom encode as $B3\,B2\,C4\,D2$?

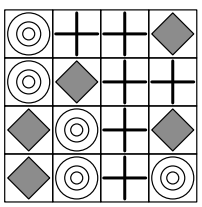
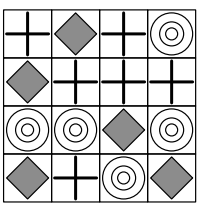
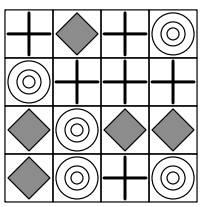
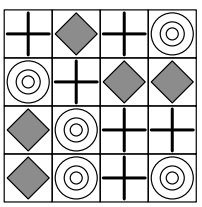
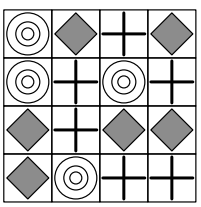
	A	*B*	*C*	*D*
1	B	K	Z	E
2	P	A	F	H
3	S	M	R	W
4	I	N	T	L

A) MAZE **B)** MASK **C)** MILK **D)** MATE **E)** MATH

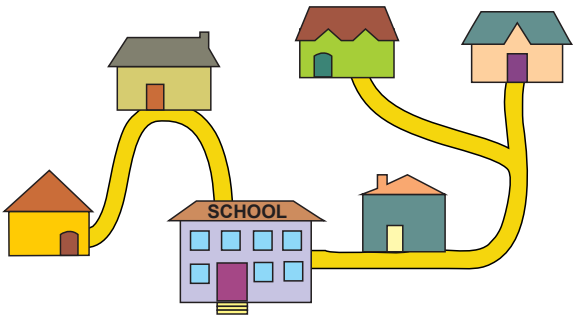
Questions for 5 points

13. Which figure can be made from these two pieces?



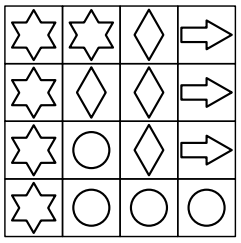
A)  **B)**  **C)**  **D)**  **E)** 

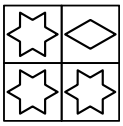
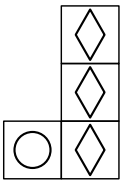
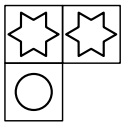
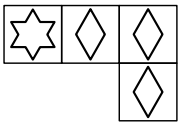
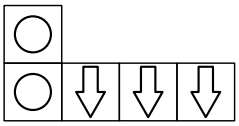
14. The picture shows the five houses of five friends and their school. To go to school, Doris and Ali walk past Leo's house. Eva walks past Chole's house. Which is Eva's house?



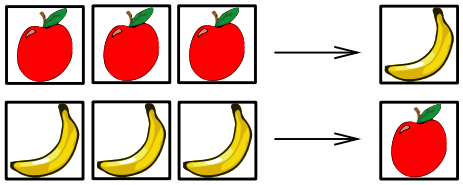
A)  B)  C)  D)  E) 

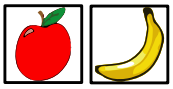
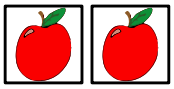
15. Mara built the square by using four of the following five shapes. Which shape was not used?



A)  B)  C)  D)  E) 

16. Ainis has cards with apples and bananas. He can exchange them only in two following ways:
3 apple cards he swaps to 1 banana card.
3 banana cards he swaps to 1 apple card.
What will he finish with after all possibles exchanges if he starts with 4 apple cards and 5 banana cards?

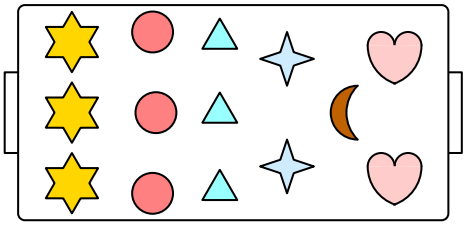


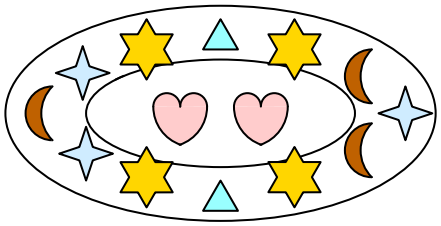
A)  B)  C)  D)  E) 

17. The cards 2 3 4 5 6 are placed into two boxes. The sums of the numbers in each box are the same. Which number must be in the box with the number 4?

A) Only 3 **B)** Only 5 **C)** Only 6 **D)** 5 or 6 **E)** 2 or 3

18. Each participant in a cooking contest baked one tray of cookies like the one shown. What is the smallest number of trays of cookies needed to make the plate shown?





A) 1 **B)** 2 **C)** 3 **D)** 4 **E)** 5