Canguro Matemático Costarricense

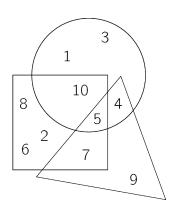


PreEcolier Test Second grade

Name of the student:	
NT C 11 : 1:1 1:	
Name of the institution:	

Kangourou Sans Frontières Costa Rica 2023 3 points

1.

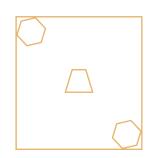


Which number is inside the triangle, the square and the circle?

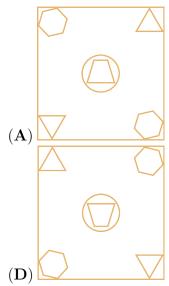
- $(\mathbf{A}) 1$
- $(\mathbf{B}) 4$
- (\mathbf{C}) 5
- $(\mathbf{D}) 9$
- (E) 12

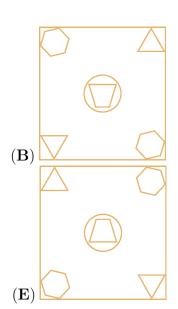
2. Some shapes are printed on 2 pieces of glass. Anna places one on top of the other, without turning either piece.

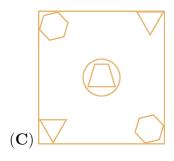




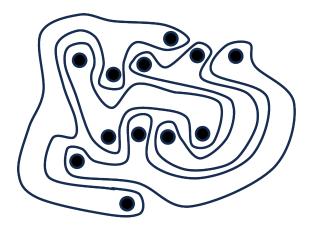
What does she see?







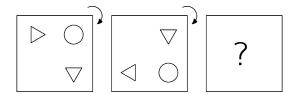
3. The picture shows 4 strange shapes.



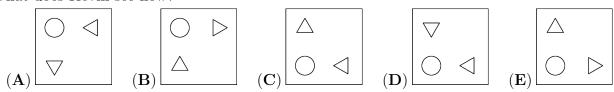
How many shapes have 3 dots inside?

- $(\mathbf{A}) 0$
- (**B**) 1
- (\mathbf{C}) 2
- (\mathbf{D}) 3
- $(\mathbf{E}) 4$

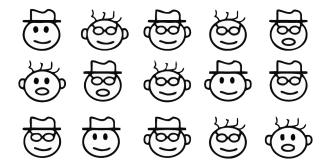
4. Kevin the kangaroo puts a picture on the table.



He rotates the picture through a quarter turn, as shown. He then does the same rotation again. What does Kevin see now?



5. In the picture, there are 8 different faces.



Each face appears twice, except for one. Which face appears only once?



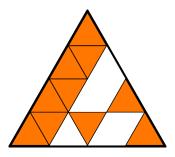








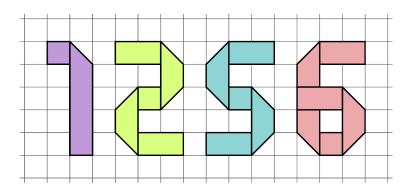
6. Bruno is making this large triangle using identical small triangular tiles.



How many more tiles does Bruno need to complete the large triangle?

- $(\mathbf{A}) 3$
- $(\mathbf{B}) 4$
- (\mathbf{C}) 5
- (\mathbf{D}) 6
- $(\mathbf{E}) 7$

7. Each number below is made using a piece of ribbon.



Which piece of ribbon is the longest?

(**A**) 1

 (\mathbf{B}) 2

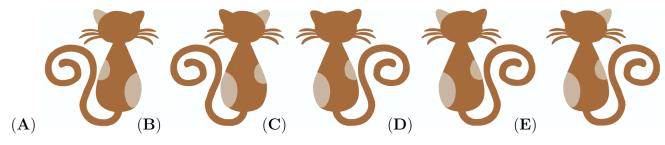
 (\mathbf{C}) 5

 (\mathbf{D}) 6

- (E) They are all the same length.
- 8. Elena uses the stamp shown to make a picture.



Which picture does she make?



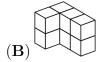
4 points

9. A student has 4 blocks, as shown.



Which of the following shapes cannot be made using these 4 blocks?



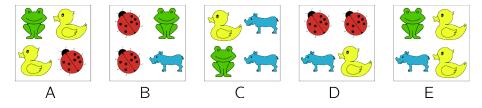




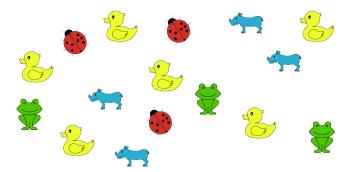




10. Chen has 5 baskets, each containing 4 toys.



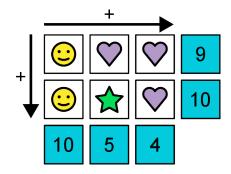
He dropped 4 of the baskets and the toys were mixed up.



Which basket did he not drop?

- $(\mathbf{A}) A$
- (\mathbf{B}) B
- (\mathbf{C}) C
- (\mathbf{D}) D
- $(\mathbf{E}) \to$

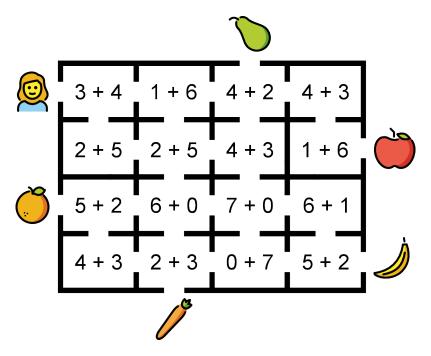
 ${f 11.}$ In the following diagram, each shape represents a different value, same shapes represents same value.



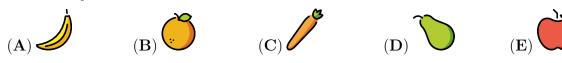
What is the value of

- (\mathbf{A}) 2
- (\mathbf{B}) 3
- (\mathbf{C}) 4
- (\mathbf{D}) 5
- (\mathbf{E}) 6

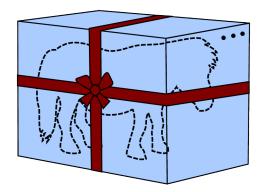
12. Catrina wants to walk through the maze so that she visits only rooms where the answer to the sum is 7.



Which object can Catrina reach?



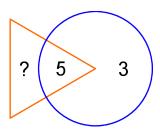
13. A toy pony is inside a box that is 1 metre tall, 1 metre wide and 2 metres long.



A ribbon goes around the box, as shown. The knot uses an extra 1 metre of ribbon. How long is the ribbon in total?

(**A**) 9 metres (**B**) 11 metres (**C**) 13 metres (**D**) 15 metres (**E**) 17 metres

14. The sum of the numbers in the triangle should be twice the sum of the numbers in the circle.



What number must replace the question mark?

- (\mathbf{A}) 3
- (\mathbf{B}) 5
- (\mathbf{C}) 8
- (**D**) 11
- (E) 16

15. A line of pictures is made by repeating this pattern of 5 pictures always in the same order.



















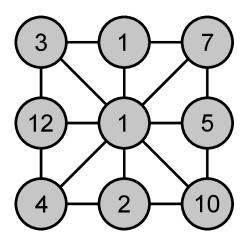




Which picture is in the 27th position in the line?

- (A) 💝
- (B)
- (C) > **
- (\mathbf{D})
- (\mathbf{E})

16. One of the numbers in the picture is equal to the sum of the numbers connected directly to it.

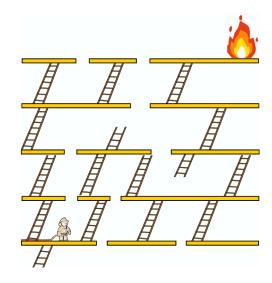


Which number is this?

- (\mathbf{A}) 3
- (**B**) 5
- (\mathbf{C}) 7
- (**D**) 10
- (E) 12

5 points

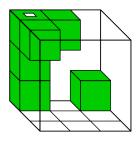
17.



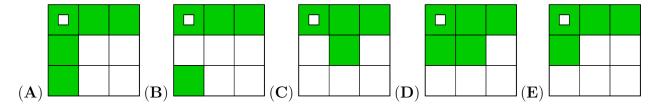
What is the smallest number of ladders the firefighter must use to reach the fire without jumping?

- $(\mathbf{A}) 4$
- (\mathbf{B}) 5
- (\mathbf{C}) 6
- $(\mathbf{D})7$
- $(\mathbf{E}) 8$

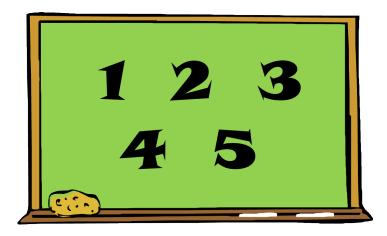
18. Chiara has a transparent box containing 6 small cubes, as shown.



What does Chiara see if she looks at the box from above?



19. Esteban wants to pick two numbers from the board and add them together.



How many different results could Esteban get?

(**A**) 5

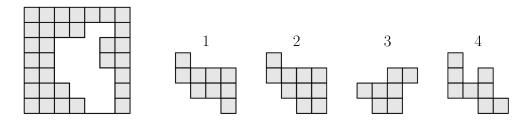
 (\mathbf{B}) 6

 $(\mathbf{C}) 7$

(**D**) 8

(E) 10

20.



Which two pieces can be used to complete the grid without overlapping?

 (\mathbf{A}) 1 and 2

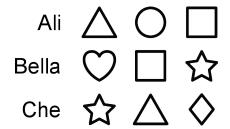
 (\mathbf{B}) 1 and 3

 (\mathbf{C}) 3 and 4

 (\mathbf{D}) 2 and 4

 (\mathbf{E}) 2 and 3

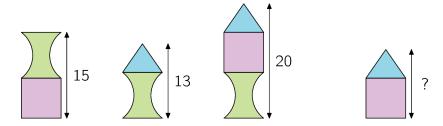
21. Ali, Bella, Che and Dimitry each have 3 shapes. Each child has exactly one shape in common with every other child.



Which shapes does Dimitry have?



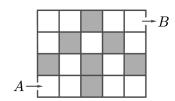
22. Zoran builds towers from three types of blocks. The heights of three of them are shown in the picture.



What is the height of the fourth tower?

- (**A**) 12
- (B) 13
- (C) 14
- (**D**) 16
- (E) 17

23. Zara wants to move through the grid from A to B. She can only move to the right or upwards. Each time she visits a grey box, she has to pay 1 euro. Each time she visits a white box, she has to pay 2 euros.



How much would she pay for the cheapest path?

(**A**) 11 euros

(B) 12 euros

(**C**) 13 euros

(**D**) 15 euros

(E) 16 euros

24. Andrew was throwing darts at a target. He started with 10 darts and got 2 new darts each time he hit the target. In total, Andrew threw 20 darts and then had no darts left. How many times did Andrew hit the target?

- $(\mathbf{A}) 4$
- (**B**) 5
- (**C**) 6
- (\mathbf{D}) 8
- (E) 10