Canguro Matemático Costarricense
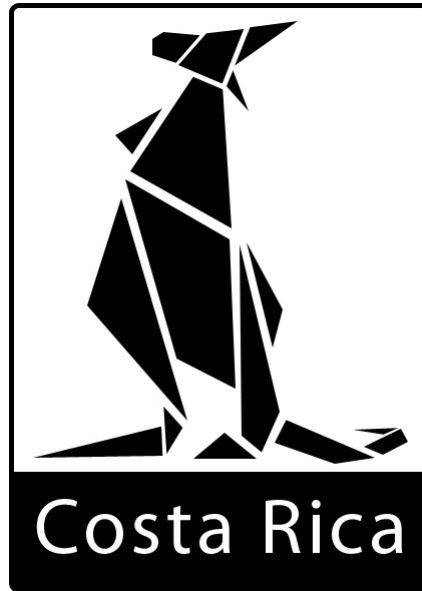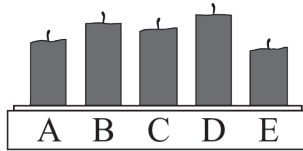
Ecolier Test
Third grade

Name of the student:_____

Name of the institution:_____

Kangourou Sans Frontières
Costa Rica 2023

3 points

1. Akira lits 5 identical candles all at the same time. They stopped burning at different times and now look as shown in the picture.

Which candle stopped burning first?

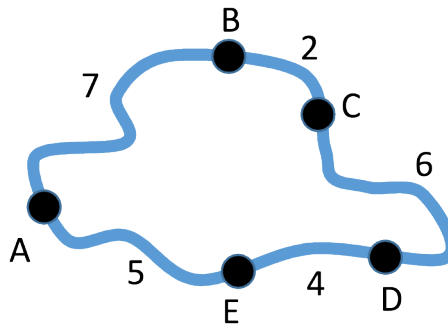(**A**) A   (**B**) B   (**C**) C   (**D**) D   (**E**) E

2. The 2 kangaroo coins with the question mark on have the same value.

$$20 + 10 + 10 + ? + ? + 1 = 51$$

What is this value?

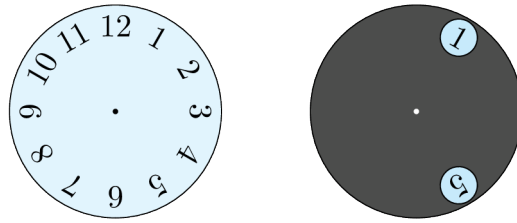(**A**) 1   (**B**) 2   (**C**) 5   (**D**) 10   (**E**) 20

3. The map shows five villages A, B, C, D and E, and the distances in kilometres between them. Only two villages are the same distance apart no matter which route you choose.

Which are these two villages?

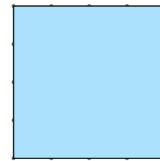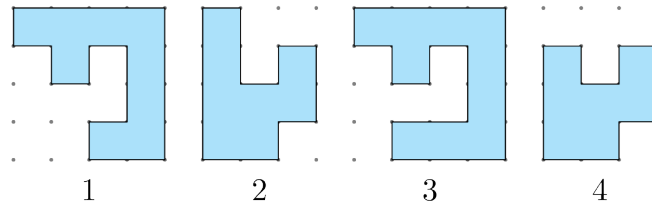(**A**) B and E   (**B**) B and D   (**C**) C and E   (**D**) A and C   (**E**) A and D

4. A gray circle with 2 large holes in it is put on top of a clock-face, as shown.

The gray circle is turned around its center. Which 2 numbers is it possible to see at the same time?

(**A**) 4 and 9   (**B**) 5 and 9   (**C**) 5 and 10   (**D**) 6 and 9   (**E**) 7 and 12
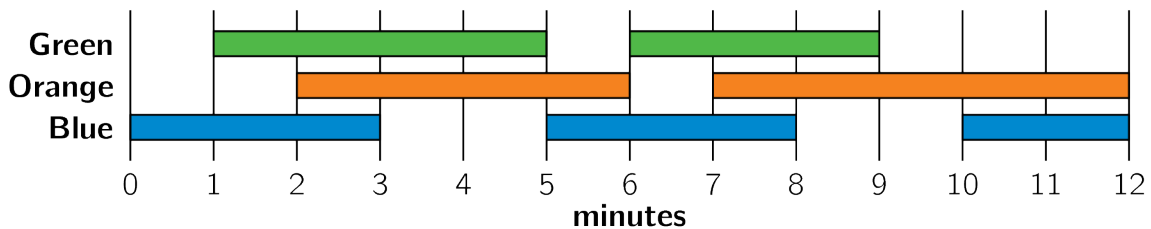
5. Alice has these puzzle pieces:

Which 2 pieces can she put together to form this square?

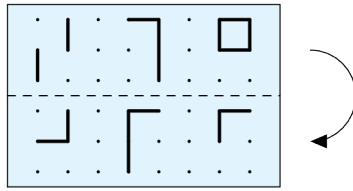(**A**) 1 and 2   (**B**) 1 and 3   (**C**) 1 and 4   (**D**) 2 and 3   (**E**) 2 and 4

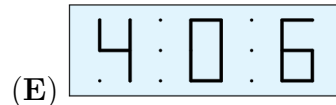**6.** A light engineer in the theatre turns the lights on and off. She uses the plan shown.
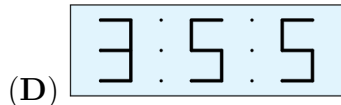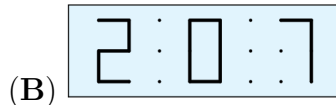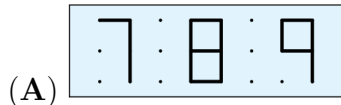

How long in total are exactly 2 of the lights on at the same time?

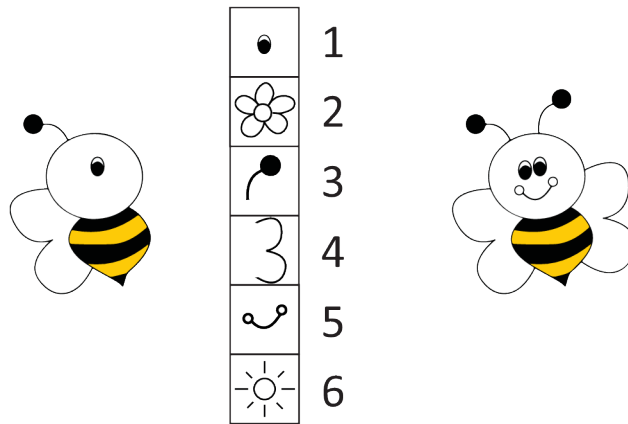(**A**) 2 minutes   (**B**) 6 minutes   (**C**) 8 minutes   (**D**) 9 minutes   (**E**) 10 minutes

7. Kristoffer folds the transparent paper along the dashed line.

What can he then see?

(**A**) `7 8 9`

(**B**) `2 0 7`

(**C**) `6 0 4`

(**D**) `3 5 5`

(**E**) `4 0 6`

8. Raha wants to finish the bee on the left according to the model on the right.

Raha needs to win points to unlock parts of the bee. How many points does she need to win to complete the bee?

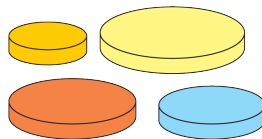(**A**) 9   (**B**) 10   (**C**) 11   (**D**) 12   (**E**) 13

4 points

9. Anna has 4 discs of different sizes. She wants to build a tower of 3 discs so that every disc is smaller than the disc below it.
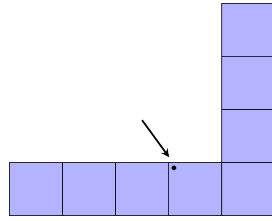
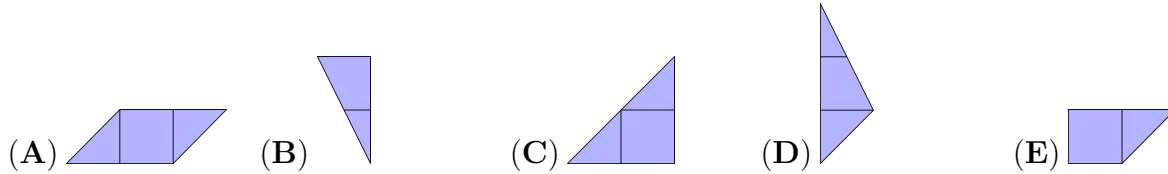How many different towers can Anna make?

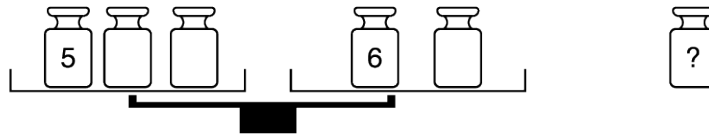(**A**) 1   (**B**) 2   (**C**) 4   (**D**) 5   (**E**) 6

10. The shape below is covered with the 5 pieces shown in the answers.

Which piece will cover the dot?

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

11. There are six weights of 1, 2, 3, 4, 5 and 6 kg. Rossitza puts five of them on the scales and puts one weight aside. The scales is balance.

Which weight did she put aside?

(**A**) 1 kg   (**B**) 2 kg   (**C**) 3 kg   (**D**) 4 kg   (**E**) can't be sure

12. Five children share a birthday and each child has their own cake. Lea is two years older than Jose, but one year younger than Ali. Vittorio is the youngest. Which is Sarah's cake?

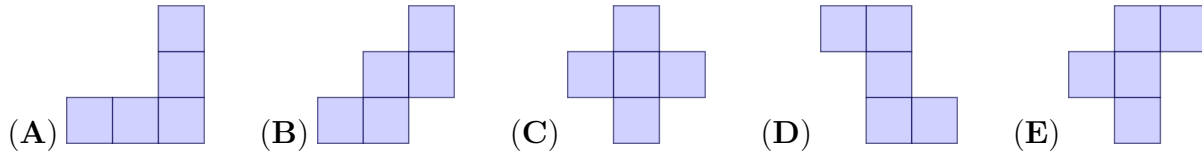(**A**)   (**B**)   (**C**)   (**D**)   (**E**)
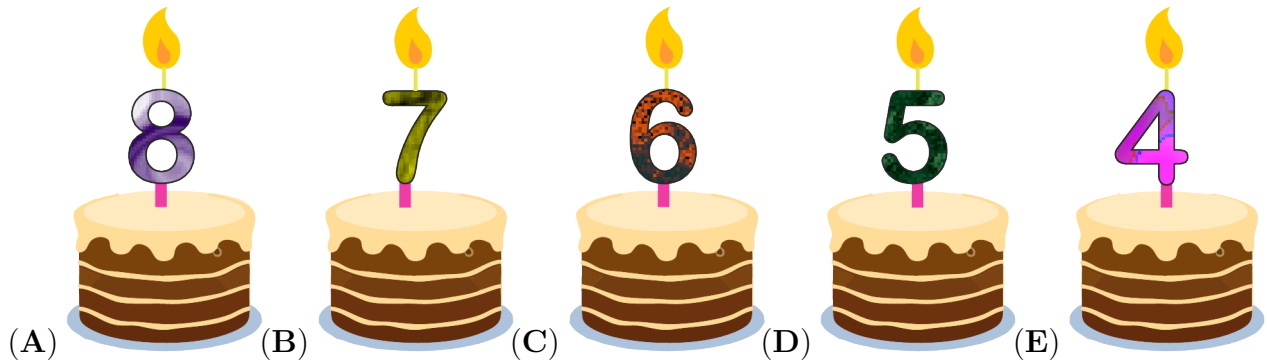
13. Emma finished third in a solo dance competition. There were three dancers between her and last place. In total, how many dancers took part in the competition?

(**A**) 4   (**B**) 5   (**C**) 6   (**D**) 7   (**E**) 8

14. Malik places one of the five pieces on the grid. He cannot rotate or flip the pieces.

1	6	7
9	5	4
2	8	3

Which piece should he use to cover the numbers with the largest sum?

(A) (B) (C) (D) (E)

15. Three frogs live in a pond. Each night, one of the frogs sings a song to the other two. After 9 nights, one of the frogs had sung 2 times. Another frog had listened to 5 songs. How many songs had the third frog listened to?

(A) 7   (B) 6   (C) 5   (D) 4   (E) 3

16. Digits 1, 1, 2 and 3 are printed on four different cards. Three cards are laid out to make a subtraction, as shown in the picture.
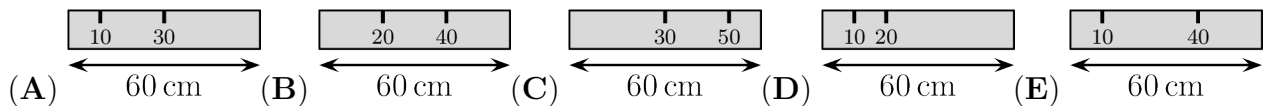
How many different results can be obtained?

(A) 6   (B) 8   (C) 10   (D) 12   (E) 24

5 points

17. Ali has a 60 cm ruler. Unfortunately, some of the markings have faded away. He is able to measure any of the lengths 10, 20 , 30 , 40 , 50 and 60 cm using his ruler only once. Which is Ali's ruler?

(A) 10 30 — 60 cm   (B) 20 40 — 60 cm   (C) 30 50 — 60 cm   (D) 10 20 — 60 cm   (E) 10 40 — 60 cm

18. There are 8 cars waiting in a queue for the ferry. Every car contains either 2 or 3 people. There are 19 people in total waiting for the ferry. How many cars contain exactly 2 people?
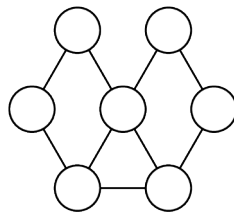
(A) 2   (B) 3   (C) 4   (D) 5   (E) 6

19. The Metro line has 6 stations, A, B, C, D, E, and F. The train stops at every station. When it reaches one of the two end stations, it changes its direction. The train driver started driving at station B and her first stop was station C.

West A B C D E F East
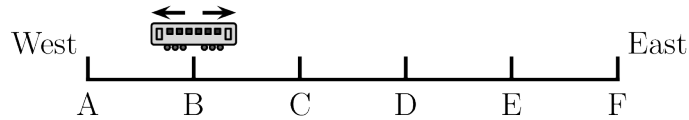
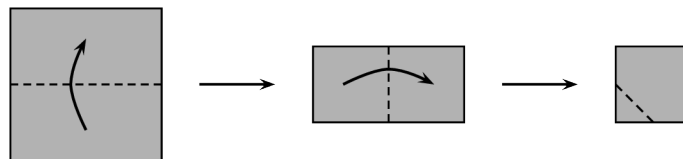Which station will be her 96th stop?

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

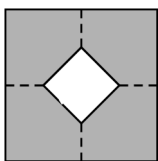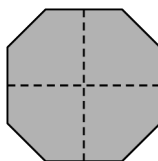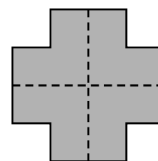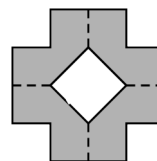**20.** Hatice wants to paint the circles in the picture.
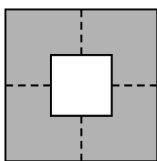
She wants to paint any 2 circles connected with a line different colours. What is the smallest number of colours she needs?

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

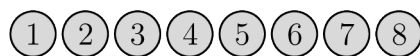**21.** Rebecca folds a square piece of paper twice. Then she cuts off one corner. Next, she unfolds the paper.

What does the paper look like once unfolded?

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

22. 6 beavers and 2 kangaroos are standing in a line. Amongst any 3 consecutively numbered animals, exactly 1 is a kangaroo.

1 2 3 4 5 6 7 8

Which numbered animal is a kangaroo?

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

23. There are five clocks on the wall. It is known that one clock is an hour fast, one clock is an hour slow, one clock shows the correct time and two clocks have stopped.
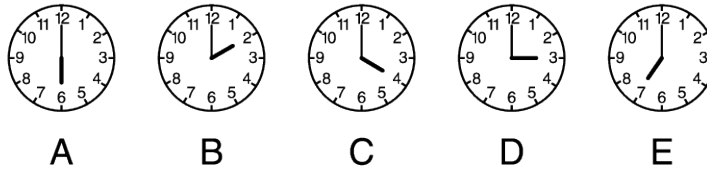
Which clock shows the correct time?

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

24. Adam and Brenda have 9 marbles each. Together, they have 8 grey and 10 black marbles. Brenda has twice as many black marbles as grey marbles.
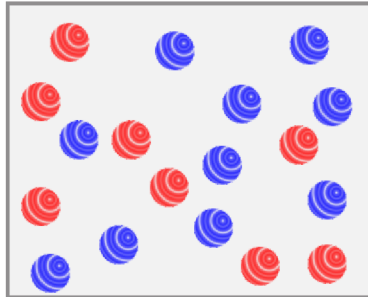
How many black marbles does Adam have?

(**A**) 3 (**B**) 4 (**C**) 5 (**D**) 6 (**E**) 0

Name:

Institution:

01.	A	B	C	D	E
02.	A	B	C	D	E
03.	A	B	C	D	E
04.	A	B	C	D	E
05.	A	B	C	D	E
06.	A	B	C	D	E
07.	A	B	C	D	E
08.	A	B	C	D	E
09.	A	B	C	D	E
10.	A	B	C	D	E
11.	A	B	C	D	E
12.	A	B	C	D	E

13.	A	B	C	D	E
14.	A	B	C	D	E
15.	A	B	C	D	E
16.	A	B	C	D	E
17.	A	B	C	D	E
18.	A	B	C	D	E
19.	A	B	C	D	E
20.	A	B	C	D	E
21.	A	B	C	D	E
22.	A	B	C	D	E
23.	A	B	C	D	E
24.	A	B	C	D	E

Costa Rica