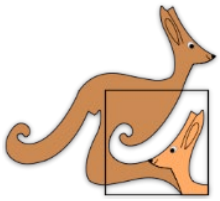


INTERNATIONAL CONTEST-GAME
MATH KANGAROO
CANADA

INSTRUCTIONS
GRADE 3-4

1. You have 60 minutes to solve 24 multiple choice problems. For each problem, decide which answer is correct and fill in (blacken) the oval that has the same letter as the appropriate answer. If you fill in (blacken) more than one oval for a question, your response will be marked as wrong.
2. Record your answers in the response form. Remember that this is the only sheet that is marked, so make sure you have all your answers transferred to the response form before giving it back to the contest supervisor.
3. The problems are arranged in three groups. A correct answer of the first 8 problems is worth 3 points. A correct answer of problems 9-16 is worth 4 points. A correct answer of problems 17-24 is worth 5 points. For each incorrect answer, one point is deducted from your score. Each unanswered question is worth 0 points. To avoid negative scores, you start from 24 points. The maximum score possible is 120.
4. The use of external material or aid of any kind is **not permitted**.
5. The figures *are not* drawn to scale. They should be used only for illustration purposes.
6. Remember, you have about 2 to 3 minutes for each problem; hence, if a problem appears to be too difficult, save it for later and move on to another problem.
7. At the end of the allotted time, please **give the response form to the contest supervisor**.
8. Your score and electronic Certificate of Participation will be available in your account after June 1.

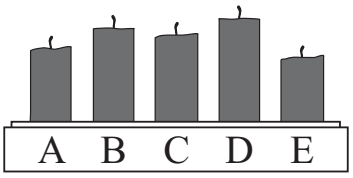
Good luck and enjoy!

Canadian Math Kangaroo Contest team

CANADIAN MATH KANGAROO CONTEST PROBLEMS

PART A: EACH CORRECT ANSWER IS WORTH 3 POINTS

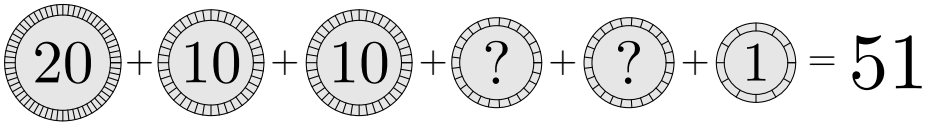
1. Akira lit 5 identical candles all at the same time. They stopped burning at different times and now look as shown in the picture.



Which candle stopped burning first?

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

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

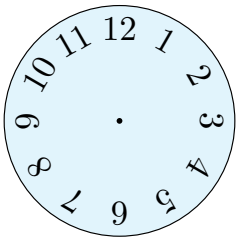


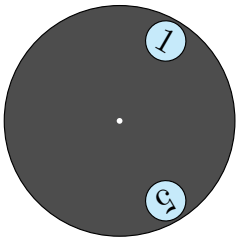
What is this value?

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

3. In the figure, the dark gray disc with two holes is put on a clock-face and is turned around its center.

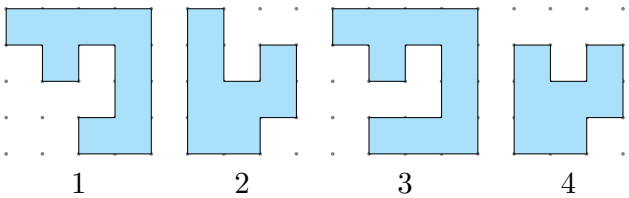
What two numbers is it possible to see at the same time?



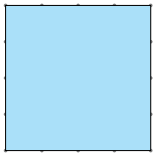


(**A**) 4 and 9 (**B**) 10 and 2 (**C**) 5 and 10 (**D**) 6 and 9 (**E**) 7 and 12

4. Alice has four puzzle pieces:



Which two pieces can she put together to form this square? (pieces can be rotated)



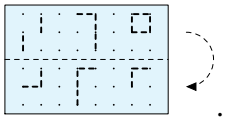
(**A**) 1 and 2 (**B**) 1 and 3 (**C**) 1 and 4 (**D**) 2 and 3 (**E**) 2 and 4

5. Holger continues to fill the empty cells of the table using the numbers up to 50 in the same way as the first 22 numbers:

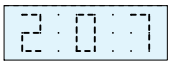
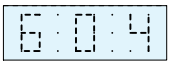
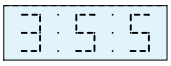
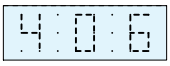
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22								

What piece can he cut from the table?

(A) 22 / 32 33 / 44 **(B)** 22 / 33 34 / 44 **(C)** 22 / 32 33 / 43 **(D)** 22 / 33 34 / 45 **(E)** 22 / 32 33 / 42

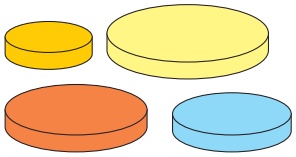
6. Kristoffer folds the transparent paper along the dashed line:  .

What can he then see?

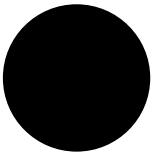
(A)  **(B)**  **(C)**  **(D)**  **(E)** 

7. Anna has 4 discs of different sizes. She wants to build a tower of three (3) discs so that every disc is smaller than the disc immediately below it.

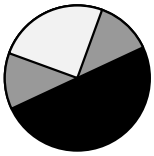
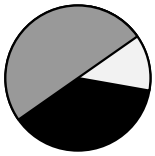
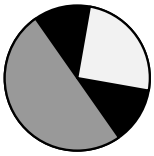
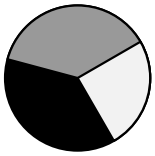
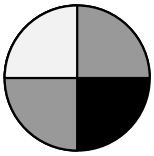
How many different towers can Anna make?



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

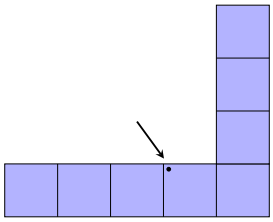
8. Danny glued these two pieces of paper  on top of the black circle  .

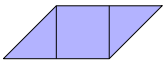
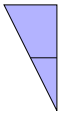
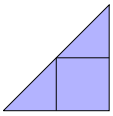
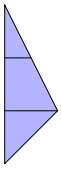
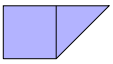
What can he NOT obtain?

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

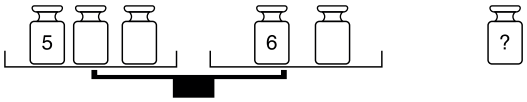
PART B: EACH CORRECT ANSWER IS WORTH 4 POINTS

9. The shape on the right is covered with the five pieces below. Which piece will cover the dot?



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

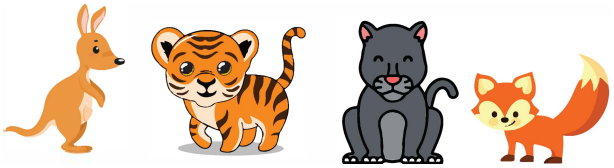
10. Rossitza has six weights of 1, 2, 3, 4, 5 and 6 kg. She puts five of them on the scale as shown and puts one weight aside. The scales balance.



Which weight did she put aside?

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

11. There are four hats: red, blue, yellow and green:  .
With closed eyes, the tiger, the fox, the panther, and the kangaroo put a hat on their heads randomly.



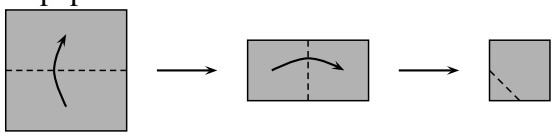
We know:
– The panther's hat is not yellow nor red.
– The panther's hat and the kangaroo's hat are not blue.
– The fox's hat and the tiger's hat are not yellow.

What color is the kangaroo's hat?

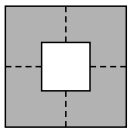
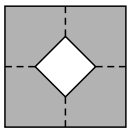
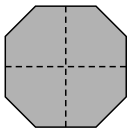
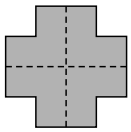
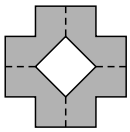
(**A**) red (**B**) blue (**C**) yellow (**D**) green

(**E**) cannot be determined

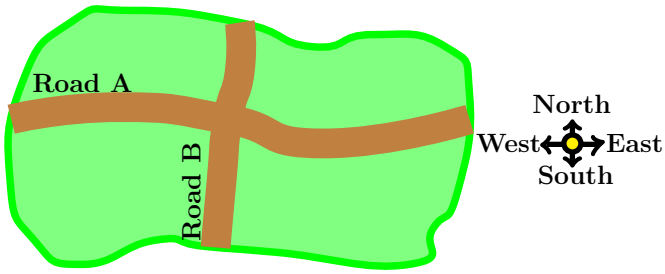
12. Rebecca folds a square sheet of paper twice as shown. Then she cuts a corner.



Then she unfolds the sheet. What does the sheet of paper look like when unfolded?

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

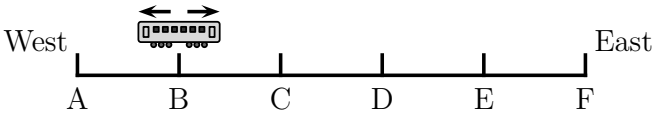
13. There are 7 houses north of Road A, 8 houses east of Road B and 5 houses south of Road A.



How many houses are west of Road B?

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

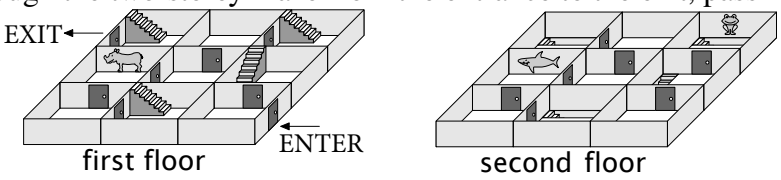
14. The Metro line has 6 stations, A, B, C, D, E, and F. The train stops at every station. When it reaches one of the two end stations, it changes its direction. The train driver started driving at station B and her first stop was station C.



Which station will be her 96th stop?

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

15. Sam walks through the two-storey maze from the entrance to the exit, passing 3 wall stickers.



In what order will she see them?

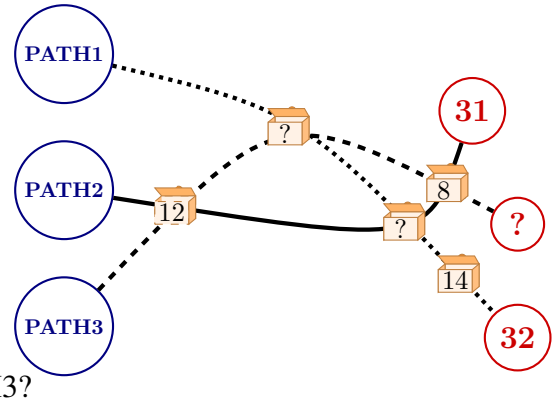
(A)  **(B)**  **(C)**  **(D)**  **(E)** 

16. There are five treasure chests.
The number of coins in each chest is marked on three of the chests. Zachary does not know the number of coins in the other two chests.

If walking along PATH1, he would collect 32 coins in total.

Along PATH2, he would collect 31 coins in total.

How many coins would Zachary collect along PATH3?



(**A**) 25 coins (**B**) 27 coins (**C**) 29 coins (**D**) 31 coins (**E**) 33 coins

PART C: EACH CORRECT ANSWER IS WORTH 5 POINTS

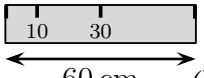
17. Six (6) beavers and two (2) kangaroos are standing in a line. Amongst any 3 consecutively numbered animals, exactly 1 is a kangaroo.

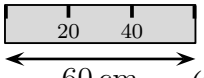
Which numbered animal is a kangaroo?

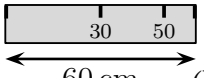
(**A**) 1 (**B**) 2 (**C**) 3 (**D**) 4 (**E**) 5

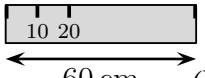
18. Ali has a 60 cm ruler. Unfortunately, some of the markings have faded away. He is able to measure any of the lengths 10, 20, 30, 40, 50, and 60 cm using his ruler only once.

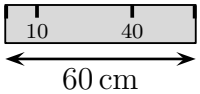
Which is Ali's ruler?

(**A**) 

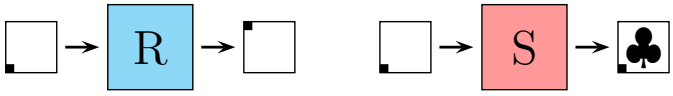
(**B**) 

(**C**) 

(**D**) 

(**E**) 

19. Elsa has two machines, R and S.



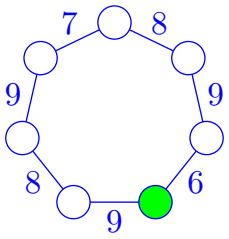
– When she puts a square sheet of paper in machine R, it turns the paper 90° clockwise.

– When she puts the paper in machine S, it stamps the paper with a ♣.

In which order are the machines used to produce the result shown?

(**A**) SRR (**B**) RSR (**C**) RSS (**D**) RRS (**E**) SRS

20. Olena writes the numbers 1 to 7 inside each circle, using each number only once.
The sum of the numbers in two circles that are next to each other is shown along each line connecting those two circles.
What number did she write inside the shaded circle?



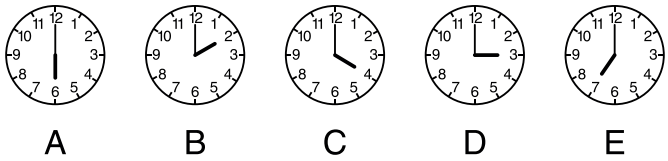
(**A**) 1 (**B**) 2 (**C**) 3 (**D**) 4 (**E**) 5

21. Hermione, Harry and Ron always walk into the common room one at a time. Hermione is never first, Harry is never second and Ron is never third.

In how many different ways could they enter?

(**A**) 1 (**B**) 2 (**C**) 3 (**D**) 4 (**E**) 6

22. 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.

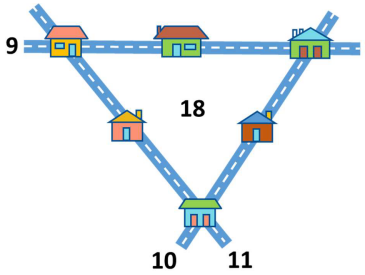


Which clock shows the correct time?

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

23. In the six houses of a neighbourhood live a total of 18 people.
On one of the streets with three houses, a total of 9 people live.
On another street of three houses a total of 10 people live and on the third street of three houses, a total of 11 people live.

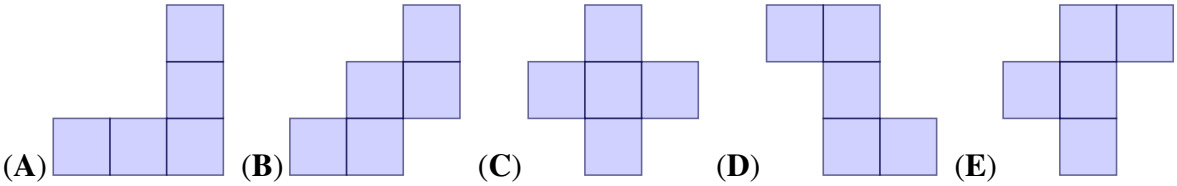
How many people in total live at the three corner houses?



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

24. Sameer wants to place one of five shapes over the square grid with numbers such that the small squares perfectly overlap.
He can rotate the shape, but not flip it. Which shape should he use if he wants to obtain the largest possible sum from the covered numbers?

2	1	9
7	8	6
4	5	3



CMKC 2023 Grade 3-4 Answers

PART A					
1	A	B	C	**D**	E
2	A	B	**C**	D	E
3	A	**B**	C	D	E
4	A	B	**C**	D	E
5	A	B	**C**	D	E
6	A	B	C	D	**E**
7	A	B	**C**	D	E
8	A	B	C	D	**E**

PART B					
9	**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

PART C					
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