



# Kangaroo 2014 Ecolier

(4th 5th grade)

NAME \_\_\_\_\_ CLASS \_\_\_\_\_

**Points:** \_\_\_\_\_ **Kangaroo leap:** \_\_\_\_\_

Separate this answer sheet from the test.

Write your answer under each problem number.

For each wrong answer,  $1/4$  of the points of the problem will be deducted.

If you don't want to answer a question, leave the space empty and no deduction will be made.

PROBLEM	1	2	3	4	5	6	7
ANSWER							

PROBLEM	8	9	10	11	12	13	14
ANSWER							

PROBLEM	15	16	17	18	19	20	21
ANSWER							

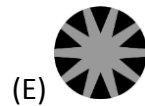
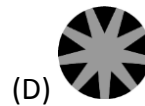
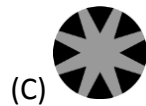
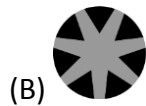


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**3 points**

**1.**

Which drawing is the central part of the picture with the star?



**2.**

Mr. Brown has painted flowers on the store window (see picture). How do these flowers look like



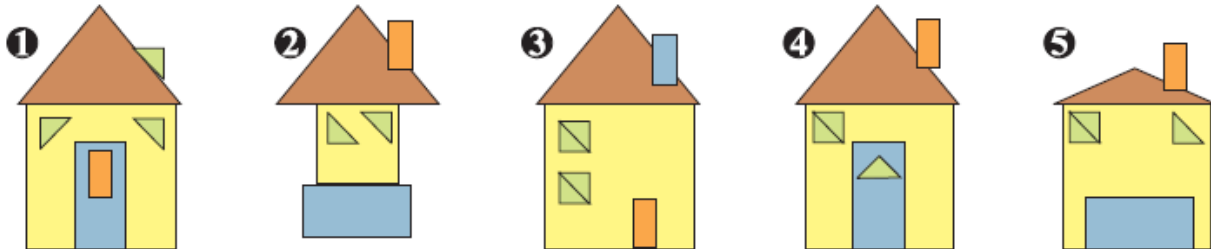
from the other side of the window?





3.

Which houses are made using exactly the same pieces of triangular or rectangular shape?



- (A) 1 and 4      (B) 3 and 4      (C) 1, 4 and 5      (D) 3, 4 and 5      (E) 1, 2, 4 and 5

4.

When Koko the Koala does not sleep, he eats 50 grams of leaves per hour. Yesterday, he slept 20 hours. How many grams of leaves did he eat yesterday?

- (A) 0      (B) 50      (C) 100      (D) 200      (E) 400

5.

Maria subtracts and gets as results the numbers from zero to five. She connects the dots, starting at the dot with the result 0 and goes on in ascending order ending at the dot with the result 5. Which figure does she get?

$2-2$        $6-5$   
 $8-6$        $11-8$   
 $13-9$        $17-12$

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

6.

Adam built fewer sandcastles than Martin but more than Susan. Lucy built more sandcastles than Adam and more than Martin. Dana built more sandcastles than Martin but fewer than Lucy. Who of them built the most sandcastles?

- (A) Martin      (B) Adam      (C) Susan      (D) Dana      (E) Lucy



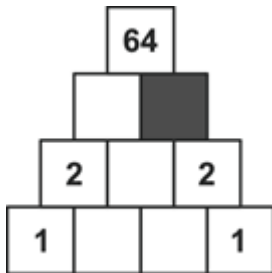
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with Pakilan ala-aste

7.

Monica writes numbers in the diagram so that each number is the product of the two numbers below it. Which number should she write in the grey cell?



(A) 0

(B) 1

(C) 2

(D) 4

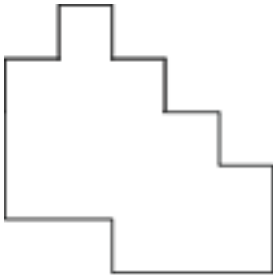
(E) 8



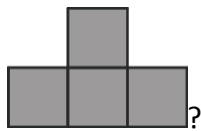
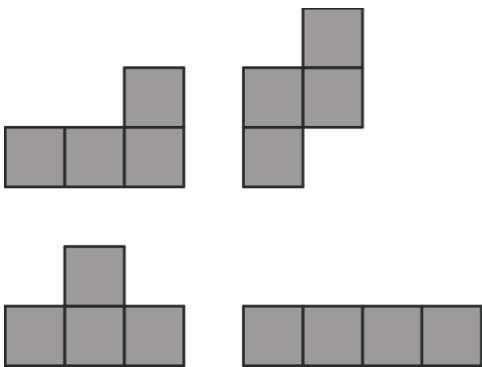
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4 points

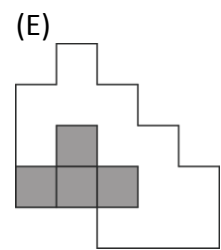
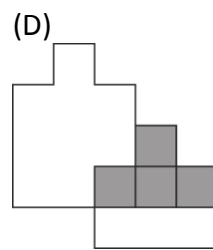
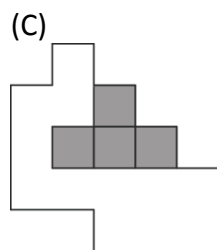
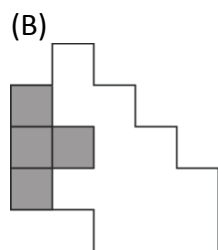
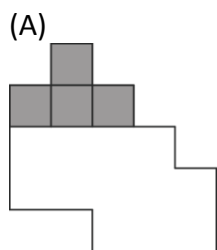
8.



Ann covers the shape shown above with all the pieces shown below.



Where should she put the piece ?





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**9.**

Jacky wants to insert the digit 3 somewhere in the number 2014. Where should she insert the digit 3 if she wants her five-digit number to be as small as possible?

- (A) in front of 2014
- (B) between the 2 and the 0
- (C) between the 0 and the 1
- (D) between the 1 and the 4
- (E) behind 2014

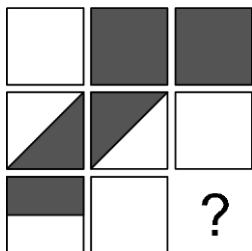
**10.**

Some candies were in a bowl. Sally took half of the candies. Then Tom took half of the candies left in the bowl. After that Clara took half of the remaining candies. In the end there were 6 candies in the bowl. How many candies were in the bowl at the beginning?

- (A) 12
- (B) 18
- (C) 20
- (D) 24
- (E) 48

**11.**

Which tile must be added in the picture so that the white area is as big as the black area?



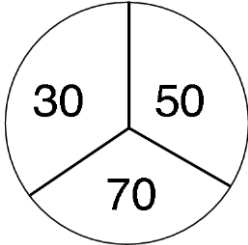
- (A) 
- (B) 
- (C) 
- (D) 
- (E) 



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**12.**

Paula shoots arrows at the following target.



When she misses, she obtains zero points. Paula shoots two arrows and adds the number of points. Which of the following sums cannot be her score?

- (A) 60                      (B) 70                      (C) 80                      (D) 90                      (E) 100

**13.**

Rabbit Borya likes cabbages and carrots very much. In a day he eats either

- 9 carrots, or
- 2 cabbages, or
- 1 cabbage and 4 carrots.

During one week Borya has eaten 30 carrots. How many cabbages has he eaten during this week?

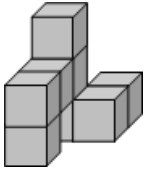
- (A) 6                      (B) 7                      (C) 8                      (D) 9                      (E) 10



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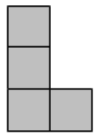
14.

The solid in the picture was made by sticking eight equal cubes together.

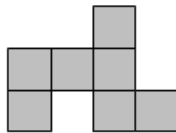


How does this solid look from above?

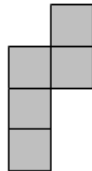
(A)



(B)



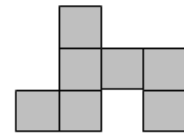
(C)



(D)



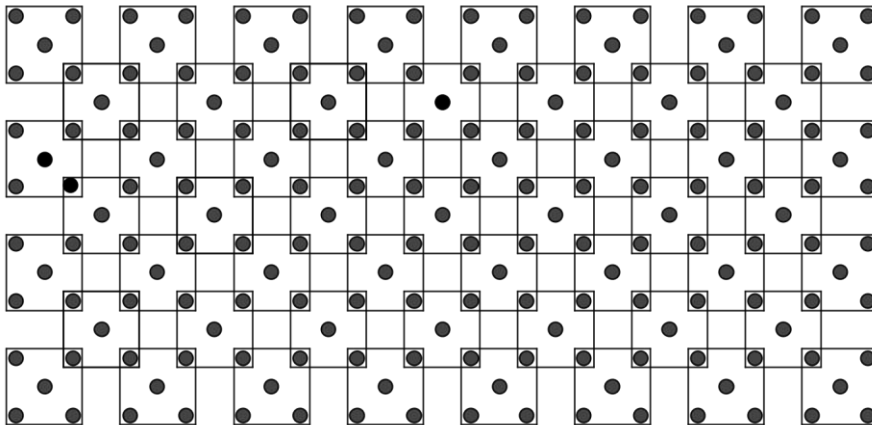
(E)



5 points

15.

How many dots are there in this picture?



(A) 180

(B) 181

(C) 182

(D) 183

(E) 184

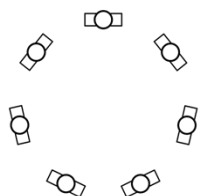




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**16.**

Seven children are standing in a circle. No two boys are standing next to each other. No three girls are standing next to each other. What is the number of girls standing in the circle?



- (A) 3
- (B) 3 or 4 (both are possible)
- (C) 4
- (D) 4 or 5 (both are possible)
- (E) 5

**17.**

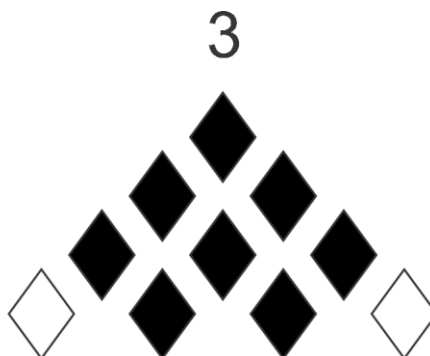
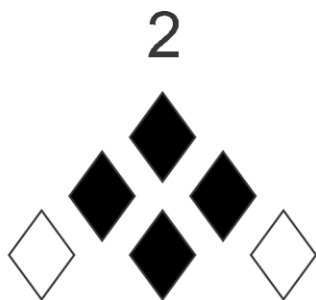
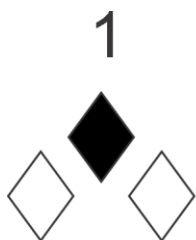
Eve arranged cards in a line as it is shown in the figure below. At each move Eve is allowed to interchange any two cards. What is the smallest number of moves Eve needs to get the word KANGAROO?



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

**18.**

A sequence of triangles of diamonds is made. The first three stages are shown. In each stage a line of diamonds is added. In the bottom line the outer diamonds are white. All other diamonds in the triangle are black. How many black diamonds has the figure in stage 6?



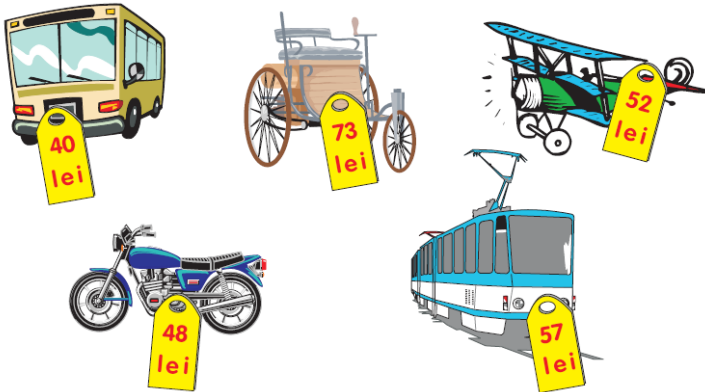
- (A) 19
- (B) 21
- (C) 26
- (D) 28
- (E) 34



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19.

In Kangaroo Land the unit of currency is lei. Kangaroo Hamish bought toys and gave the shop-assistant 150 lei. He received 20 lei back. Then he changed his mind and exchanged one of the toys for another. He got back an additional 5 lei. What toys did Hamish leave the store with?



- (A) the carriage and the plane
- (B) the carriage and the bus
- (C) the carriage and the tram
- (D) the motorcycle and the tram
- (E) the bus, the motorcycle and the tram

20.

Nick has written each of the numbers from 1 to 9 in the cells of the  $3 \times 3$  table. Only four of these numbers can be seen in the figure.

1		2
4		3


Nick has noticed that for the number 5 the sum of the numbers in the neighbouring cells equals 13 (neighbouring cells are cells sharing sides, sharing corners is not enough). He noticed that the sum of the neighbours of number 6 is also 13. Which number has Nick written in the shaded cell?

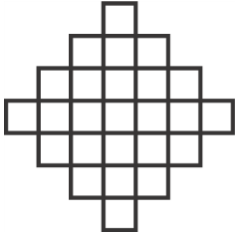
- (A) 5
- (B) 6
- (C) 7
- (D) 8
- (E) 9



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21.

What is the largest number of small squares which can be shaded so that no square  made of four shaded small squares appears on the figure?



(A) 18

(B) 19

(C) 20

(D) 21

(E) 22