

Kangaroo 2015 Ecolier

(4th and 5th grade)

NAME _____ CLASS _____

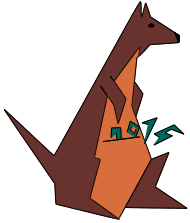
Points: _____ Kangaroo leap: _____

Separate this answer sheet from the test. Write your answer under each problem number. From each wrong answer, $\frac{1}{4}$ of the points of the problem will be deducted, for example for a 4 points problem -1 point. If you leave the answer empty, 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							

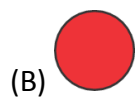
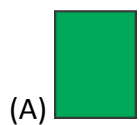
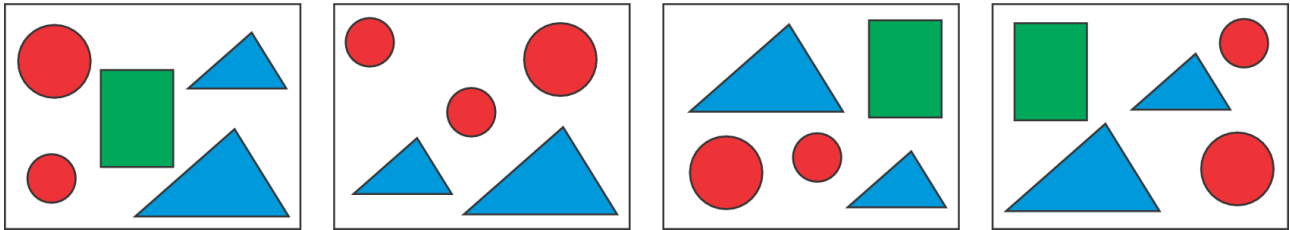


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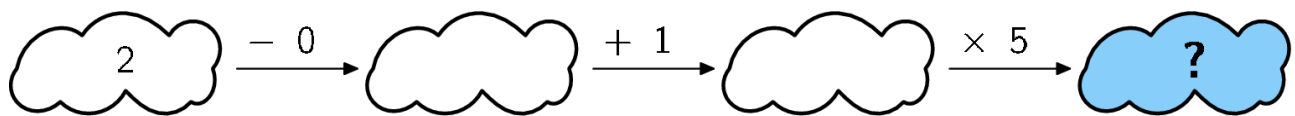
3 points

1.

Which figure is not in each of four pictures?



2.



(A) 6

(B) 7

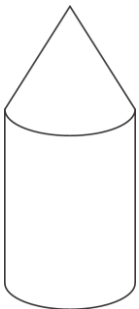
(C) 8

(D) 10

(E) 15

3.

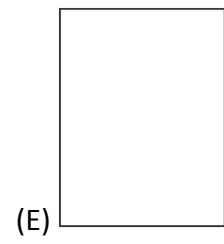
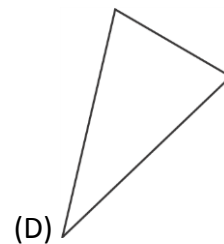
What does the round tower look like from above?

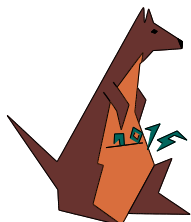


(A) 

(B) 

(C) 





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4.

Which number is hidden behind the square?

$$\triangle + 4 = 7$$

$$\square + \triangle = 9$$

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

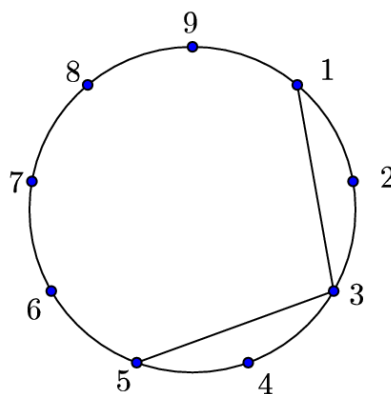
5.

A whole number has two digits. When these digits are multiplied, the product is 15. When these digits are added together, the sum is

- (A) 8 (B) 9 (C) 10 (D) 11 (E) 12

6.

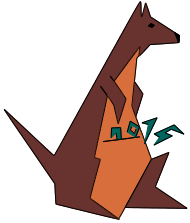
We start drawing a line at every second dot on the circle until we are back at the number 1.



The first two lines are drawn already.

What figure do we get?

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



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7.

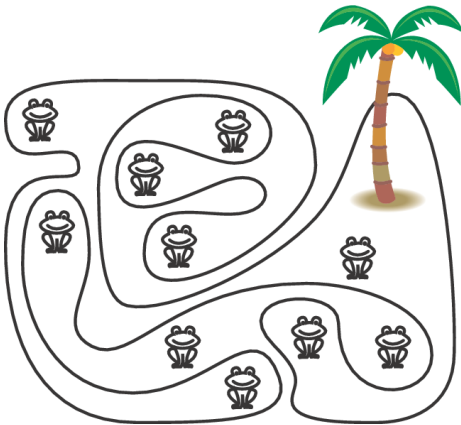
Mother ordered 2 pizzas and sliced each of them into 8 pieces for Vera's birthday. There were 14 children at the party including Vera. How many slices are left over if mother gives one slice to each child?

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

4 points

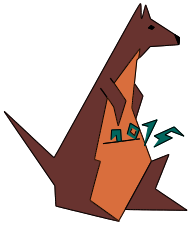
8.

In the figure, we see an island with a highly indented coastline and several frogs.



How many of these frogs are sitting on the island?

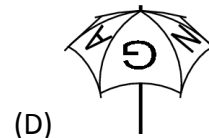
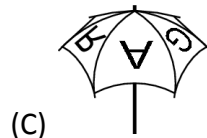
- (A) 5 (B) 6 (C) 7 (D) 8 (E) 9



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9.

My umbrella has KANGAROO written on top according to the picture. Which of the following pictures does not show my umbrella?



10.

Basil wants to cut the shape depicted in Figure 1 into identical triangles as in Figure 2. How

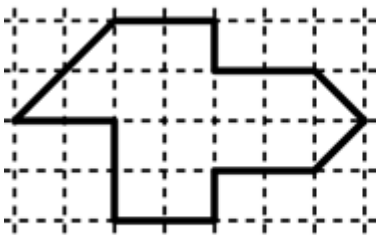


Figure 1



Figure 2

many triangles will he get?

(A) 8

(B) 12

(C) 14

(D) 15

(E) 16

11.

Luis has 7 apples and 2 bananas. He gives 2 apples to Yuri who in return gives bananas to Luis. Then Luis has as many apples as bananas. How many bananas did Yuri give to Luis?

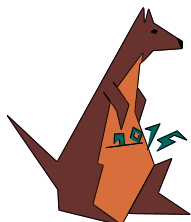
(A) 2

(B) 3

(C) 4

(D) 5

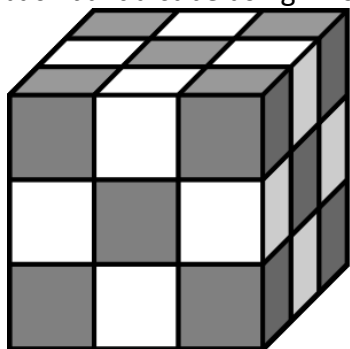
(E) 7



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12.

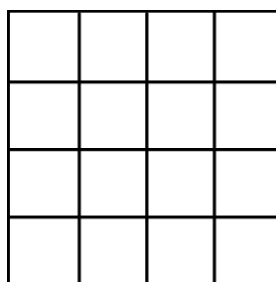
Jack built a cube using 27 small cubes which are colored either black or white (see figure).



No two of the small cubes which are colored in the same color have a common face. How many white cubes did Jack use?

- (A) 10 (B) 12 (C) 13 (D) 14 (E) 15

13.



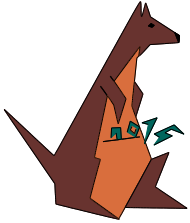
The figure is divided into three identical pieces. What do the pieces look like?

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

14.

Josip has 4 toys - a car, a doll, a ball and a ship. He wants to put them on a line on a shelf. The ship has to be next to the car and the doll has to be next to the car. In how many ways can he arrange them so all the conditions would be fulfilled?

- (A) 2 (B) 4 (C) 5 (D) 6 (E) 8

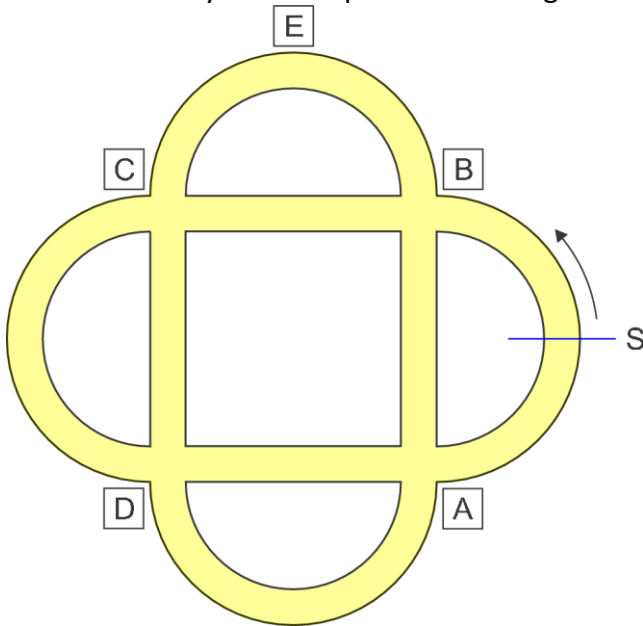


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5 points

15.

Pete rides a bicycle in the park as in the figure.



He starts from the point S in the direction of the arrow. At the first crossroad he turns right, then at the next crossroad he turns left, then right again, then left again and so on in that order. What is the sign at which he won't pass?

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

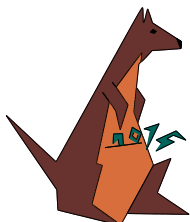
16.

There are 5 ladybirds (see figure).



Two ladybirds are friends with each other if the numbers of spots that they have differ exactly by one. On Kangaroo Day each of the ladybirds sent to each of her friends one SMS greeting. How many SMS greetings were sent?

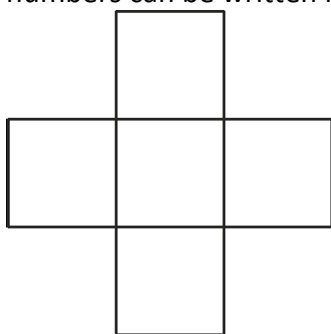
- (A) 2 (B) 4 (C) 6 (D) 8 (E) 9



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17.

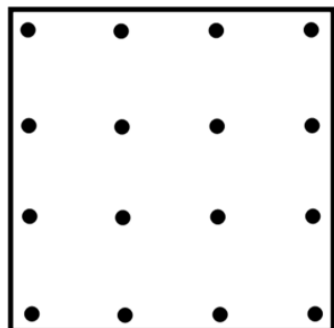
The numbers 2, 3, 5, 6 and 7 are written in the squares of the cross (see figure) so that the sum of the numbers in the row is equal to the sum of the numbers in the column. Which of the numbers can be written in the center square of the cross?



- (A) only 3 (B) only 5 (C) only 7 (D) 5 or 7 (E) 3, 5 or 7

18.

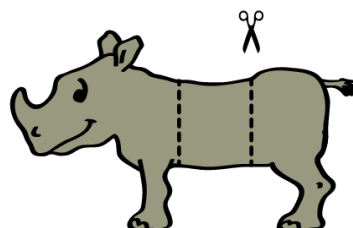
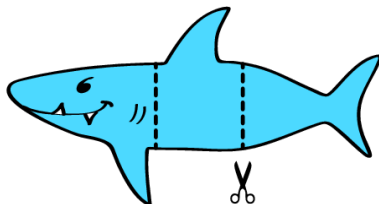
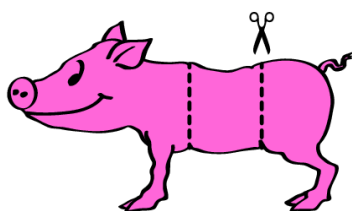
The figure shows a dotted sheet. Both horizontally and vertically the distance from one point to the next is equal. Let four points at the time become vertices in different squares. How many squares with different area is it possible to make?



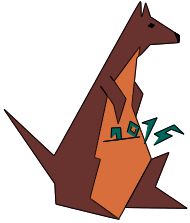
- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6

19.

Tom draws a shark, a pig and a rhino and cuts them in three pieces each as shown. Then he can make different animals by combining one head, one middle part and one bottom. How many different fantasy or real animals could Tom create?



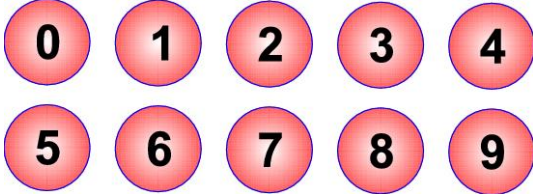
- (A) 3 (B) 9 (C) 15 (D) 27 (E) 30



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20.

Peter has ten balls, numbered from 0 to 9.



He distributed these balls among three friends: John got three balls, George four and Ann three. Then he asked each of his friends to multiply the numbers on the balls they got and the results were: 0 for John, 72 for George and 90 for Ann. What is the sum of the numbers on the balls that John received?

- (A) 11 (B) 12 (C) 13 (D) 14 (E) 15

21.

Anna, Berta, Charlie, David and Elisa were baking cookies on Saturday and Sunday. Over the whole weekend Anna made 24 cookies, Berta 25, Charlie 26, David 27 and Elisa 28. After the whole weekend one of them had twice as many cookies as after Saturday, one 3 times, one 4 times, one 5 times and one 6 times as many. Who baked the most cookies on Saturday?

- (A) Anna (B) Berta (C) Charlie (D) David (E) Elisa