

Kangaroo 2010 Ecolier (4th and 5th class)

NAME _____ CLASS/GROUP _____

Points: _____ **Kangaroo leap:** _____

Separate the answer sheet from the test.

Write your answer under each problem number.

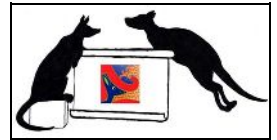
If you do NOT know the answer, leave the space empty.

For each WRONG answer, 1/4 of the points is deducted. DO NOT guess!

PROBLEM	1	2	3	4	5	6	7
ANSWER							

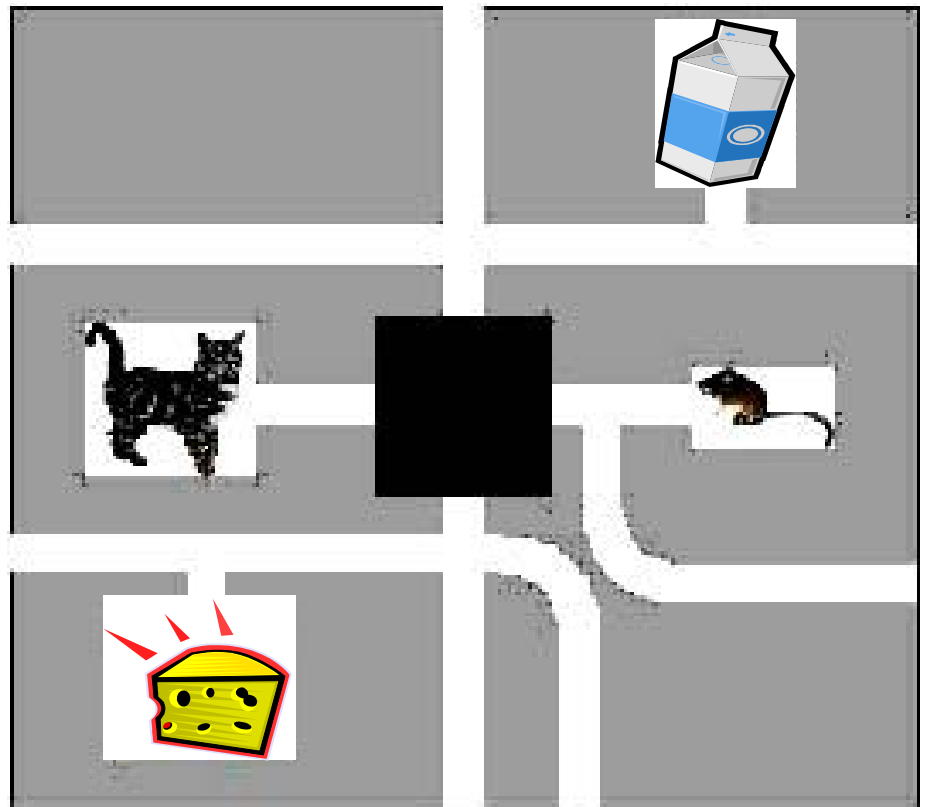
PROBLEM	8	9	10	11	12	13	14
ANSWER							

PROBLEM	15	16	17	18	19	20	21
ANSWER							



3 points

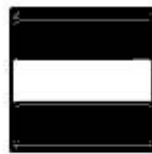
1. The maze is for a cat and a mouse. The cat can reach the milk, the mouse can reach the cheese, but the cat and the mouse will never meet. What does the hidden part of the maze look like?



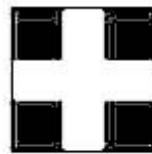
A)



B)



C)

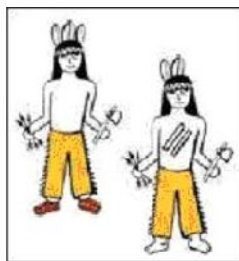


D)

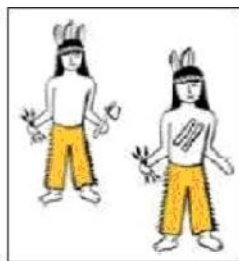


E)

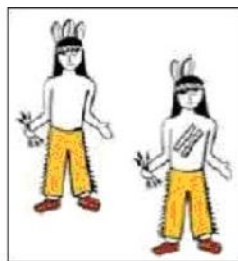
2. Indian chief Big Bear has three feathers, a tomahawk, arrows and moccasins on his feet. His son White Cheetah has two feathers, arrows, he does not have a tomahawk, he is barefooted and he has two stripes drawn on his chest. Which picture shows the chief Big Bear together with White Cheetah?



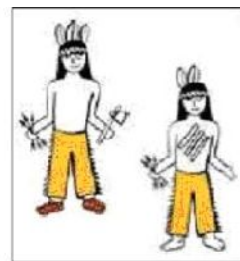
A)



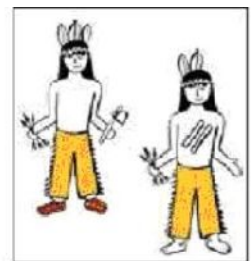
B)



C)



D)



E)

3. In Mama's lunch restaurant, the first course costs 4€, the main course 9€ and the dessert 5€. The lunch menu, which contains the first course, the main course and the dessert, costs 15€. How much does Donald save if he orders the lunch menu instead of the three separate courses.

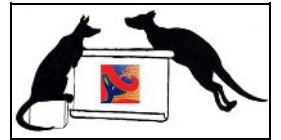
A) 3€

B) 4€

C) 5€

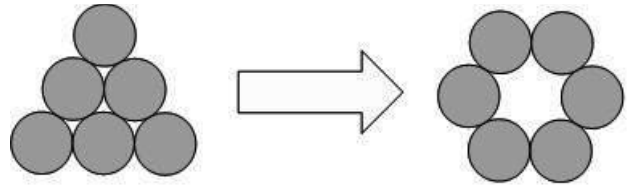
D) 6€

E) 7€



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4. Six coins form a triangle. To create the circle in the second picture, you have to move some coins. What is the smallest amount of coins you have to move?



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

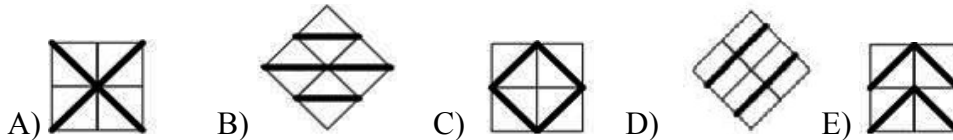
5. Four friends were eating ice-cream.

- Mišo ate more than Fero.
- Jaro ate more than Vilo.
- Jaro ate less than Fero.

Which shows who ate the most to who ate the least?

- A) Mišo, Jaro, Vilo, Fero; B) Vilo, Mišo, Fero, Jaro;
C) Mišo, Fero, Jaro, Vilo; D) Jaro, Vilo, Mišo, Fero;
E) Jaro, Mišo, Vilo, Fero.

6. Using only tiles like the one on the right, which of the following patterns would be impossible to construct if we want to cover the floor of the kitchen?



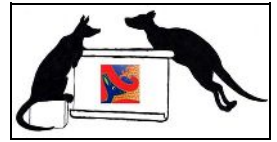
7. Centipede Eve has 100 feet. Yesterday, she bought and put on 16 pairs of new shoes. 14 of her feet are still bare. Before shopping, how many of Eve's feet had shoes?

- A) 27 B) 40 C) 54 D) 70 E) 77

4 points

8. Mathew and Clara are living in a skyscraper. Clara is living 12 floors above Mathew. One day Mathew went by stairs to visit Clara. When halfway he was in the 8th floor. On which floor does Clara live?

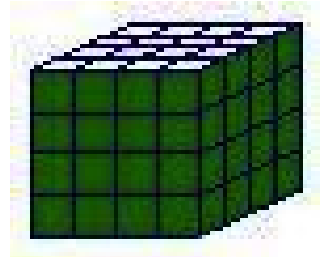
- A) 12 B) 14 C) 16 D) 20 E) 24



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9. A big cube is made of 64 little cubes. Five faces of the big cube are colored green. How many of the little cubes have three green faces?

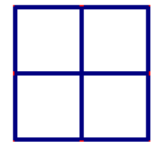
- A) 4 B) 8 C) 16 D) 20 E) 24



10. At one time a ferry can take either ten small cars or six lorries over the river. On Wednesday, it crossed the river five times, it was full and it transported 42 vehicles. How many small cars did the ferry transport?

- A) 10 B) 12 C) 20 D) 22 E) 30

11. A square is divided into four smaller ones, all of which are the same size. The smaller squares are colored either green or blue. How many different ways are there to color the given square? (If one way to color can be rotated to give the other as in the picture below, then these are considered the same.)



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

12. John starts a chain letter. He sends the letter to his friend Peter. Peter has to copy and send the letter to two new people. Everyone who receives this letter has to send it to two new people. After two rounds $1 + 2 + 4 = 7$ people have received the letter. How many people have received the letter after four rounds?

- A) 15 B) 16 C) 31 D) 33 E) 63

13. Children were measuring the length of a sand playground by using their feet. Ana took 15 steps, Betty 17, Denis 12 and Ivo 14. Who took the longest steps?

- A) Ana B) Betty C) Denis D) Ivo E) It is not possible to determine the answer.

14. If both rows have the same sum, what is the value of * ?

1	2	3	4	5	6	7	8	9	10	199
11	12	13	14	15	16	17	18	19	20	*

- A) 99 B) 100 C) 209 D) 289 E) 299



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5 points

15. The product of $60 \cdot 60 \cdot 24 \cdot 7$ equals

- A) the number of minutes in seven weeks
- B) the number of hours in sixty days
- C) the number of seconds in seven hours
- D) the number of seconds in one week
- E) the number of minutes in twenty-four weeks.

16. Every cell of the 4×4 table contains a playing card (their suits are shown in the picture). One lead allows switching the positions of any two cards. How many leads must at least be played so that each row and each column will contain all suits?

♥	♥	♦	♣
♦	♠	♠	♥
♣	♦	♠	♣
♠	♣	♥	♦

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

17. Two years ago, the sum of the ages of two cats Tony and Tiny was 15 years. Now Tony is 13 years old. In how many years will Tiny reach the age of 9 years?

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

18. Camilla wrote all positive integers from 1 to 100 consecutively into a chart with 5 columns. Her brother Tim has cut part of the chart off and he has erased some of the numbers. Which picture represents the part which Tim has cut out? The picture shows the beginning of Camilla's chart.

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

	43						58						69					81						90				
		48					52				72							86									94	

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

19. The library of the school that Ana, Bea and Carlos attend has a large number of books. "There are approximately 2010 books" says the teacher and invites the three students to guess the exact number. Ana guesses 2010, Bea guesses 1998 and Carlos guesses 2015. The teacher says that the difference between the numbers they guessed and the exact value are 12, 7 and 5 but not in this order. How many books are there in the library?

- A) 2003
- B) 2005
- C) 2008
- D) 2020
- E) 2022



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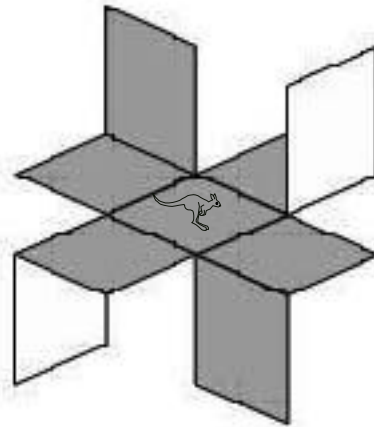
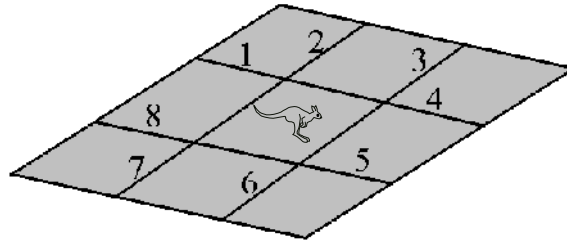
20. Andrew, Stefan, Robert and Marko met at Madonna's concert in Helsinki. They came from different cities: Paris, Dubrovnik, Rome and Berlin. This is what is known of the boys:

- Andrew and the boy from Berlin arrived in Helsinki early in the morning on the day of the concert. Neither of them has ever been to Paris or Rome.
- Robert is not from Berlin, but he arrived in Helsinki at the same time as the boy from Paris.
- Marko and the boy from Paris liked the concert very much.

Where did Marko come from?

- A) Paris B) Rome C) Dubrovnik D) Berlin E) Helsinki.

21. Eight line segments are numbered 1, 2, ..., 8 as shown in the picture. Anne cuts along four of them, in order to make the figure below. What is the sum of the numbers of the line segments Anne has cut?



- A) 16 B) 17 C) 18 D) 20 E) 21