



Kangaroo 2014 Benjamin  
(6th and 7th grade) page 1 / 7

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							



3 points

1.

Aaro spelled the word KANGAROO with cards. Unfortunately he got some cards upside down or on their sides.



Aaro can correct the letter K by turning it twice and the letter A by turning it once (see picture). How many times does he need to turn the cards in total to get all of the letters right?



(A) 4

(B) 5

(C) 6

(D) 7

(E) 8

2.

Shopkeeper Koikkalainen has painted flowers on his shop window.



What do the flowers look like from the other side of the window?

(A)



(B)



(C)



(D)



(E)





3.

In the following addition some digits are replaced by stars.

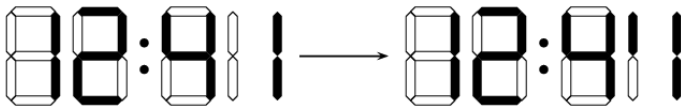
$$\begin{array}{r} 1 * 2 \\ 1 * 3 \\ + \underline{1 * 4} \\ = 3 0 9 \end{array}$$

What is the sum of the digits replaced by stars?

- (A) 0                      (B) 1                      (C) 2                      (D) 3                      (E) 10

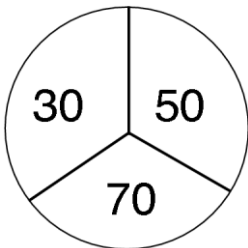
4.

Paula's digital watch is slightly broken. The rightmost digit of the display has lost all three of its horizontal lines. Paula looks at her watch just as the display changes from the figure on the right to the figure on the left. What is the time now?



- (A) 12:40                      (B) 12:42                      (C) 12:44                      (D) 12:47                      (E) 12:49

5. Pauliina shoots arrows at a target. The score for each area is marked.



Arrows missing the target give 0 points. Pauliina shoots two arrows. Which of the scores below is not possible?

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

6.

A cake weighs 900 g. Panu cuts it into four pieces. The largest piece is as heavy as the three smaller ones combined. How much does the largest piece weigh?

- (A) 250 g                      (B) 300 g                      (C) 400 g                      (D) 450 g                      (E) 600 g



7.

Harry takes part in a broom flight contest of 5 laps. The times Harry passed the starting point are shown in the table. Which lap was fastest?

	Time
start	09:55
after lap 1	10:26
after lap 2	10:54
after lap 3	11:28
after lap 4	12:03
after lap 5	12:32

- (A) the first      (B) the second      (C) the third      (D) the forth      (E) the fifth

4 points

8.

The pearl necklace in the picture contains dark grey pearls and shiny white pearls.



Aleksi wants to remove five dark grey pearls. He can only take pearls from either end of the necklace, so he has to remove some white pearls as well. What is the smallest number of white pearls Aleksi has to take?

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

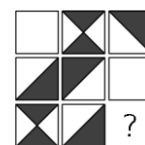
9.

Katri has 38 matches. She uses all the matches to build two separate figures on the table: a triangle and a square. Each side of the triangle has six matches. How many matches are on each side of the square?

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

10.

Which tile must be added to make the black and white areas equal?



- (A)       (B)       (C)       (D)       (E) It is impossible



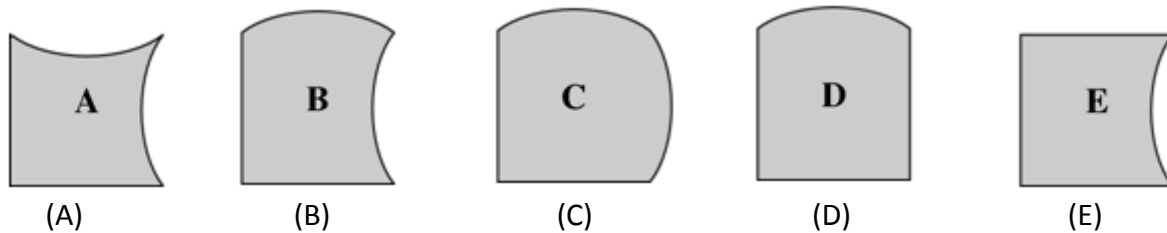
11.

Henri and Jussi started their walk from the same spot. Henri walked 1 km north, 2 km west, 4 km south and finally 1 km west. Jussi walked 1 km east, 4 km south and 4 km west. Which of the following should be Jussi's final walk to finish in the same place as Henri?

- (A) He is already in the same place as Harri.
- (B) 1 km north.
- (C) 1 km northeast.
- (D) More than 1 km northeast.
- (E) 1 km west.

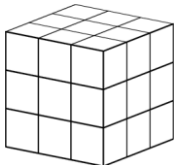
12.

A square can be formed using four of the pieces below. Which piece is left unused?

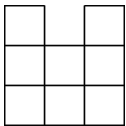


13.

The  $3 \times 3 \times 3$  cube pictured consists of 27 small cubes.



At least how many small cubes must be removed to see the following when looking from the right, from above and from the front?



- (A) 4
- (B) 5
- (C) 6
- (D) 7
- (E) 9

14.

Points  $A, B, C, D, E$  and  $F$  lie on a straight line in this order. We know the following distances:  $AF = 35$ ,  $AC = 12$ ,  $BD = 11$ ,  $CE = 12$  and  $DF = 16$ . How long is  $BE$ ?

- (A) 1
- (B) 2
- (C) 4
- (D) 8
- (E) 16



5 points

15.

A restaurant has 16 tables with either 3, 4 or 6 chairs each. The tables with 3 or 4 chairs can fit 36 customers. In total 72 customers can sit at the tables at once. How many tables with 3 chairs are there?

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

16.

The faces of a cube are numbered 1, 2, 3, 4, 5 and 6. The faces 1 and 6 share an edge. The same holds for faces 1 and 5, faces 1 and 2, faces 6 and 5, faces 6 and 4, faces 6 and 2. Which number is on the opposite face as number 4?

- (A) 1                      (B) 2                      (C) 3                      (D) 5                      (E) impossible to determine

17.

Dan placed the numbers 1 – 9 into the cells of a 3 x 3-grid. He started by placing the numbers 1, 2, 3 and 4 as shown.

1		3
2		4

The squares that share a side are called neighbours; sharing a corner is not enough. After writing all the numbers Dan noticed that the sum of the neighbours of number 5 was 9. What is the sum of the neighbours of number 6?

- (A) 14                      (B) 15                      (C) 17                      (D) 28                      (E) 29

18.

Pirita was sorting stones into groups on her desk. When she sorted the stones into groups of three, two stones were left over. When she started over and sorted the stones into groups of five, again two stones were left over. At least how many stones more would Pirita need to be able to sort the stones evenly whether she was using groups of five or three?

- (A) 1                      (B) 3                      (C) 4                      (D) 10                      (E) 13



**19.**

The king and his messengers are travelling from the castle to the summer palace at the speed of 5 km/h. Each hour a messenger travelling 10 km/h leaves the group and rides back for the castle. What is the time interval between any two consecutive messengers arriving at the castle?

- (A) 30 min      (B) 60 min      (C) 75 min      (D) 90 min      (E) 120 min

**20.**

Valle the Rabbit loves cabbages and carrots. Each day it eats either

- 9 carrots **or**
- 2 cabbages **or**
- one cabbage and 4 carrots **or**
- just grass.

During the last ten days Valle ate the total of 30 carrots and 9 cabbages. On how many of these ten days did Valle eat only grass?

- (A) 0      (B) 1      (C) 2      (D) 3      (E) 4

**21.**

In Fabuland, every sunny day is immediately preceded by two consecutive rainy days. Also, five days after any rainy day comes another rainy day. It is sunny today. For how many days at most can we predict the weather with certainty?

- (A) 1 day  
(B) 2 days  
(C) 4 days  
(D) Not even a single day can be predicted  
(E) The weather of every following day can be predicted.