



Kangaroo 2016 Benjamin

(6th and 7th 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							

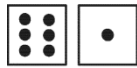
PROBLEM	15	16	17	18	19	20	21
ANSWER							

Contest not to be held before March 17th 2016.

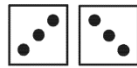
Logo design by Jenna Tuupanen.

**3 points****1.**

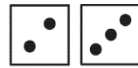
Artur, Blessing, Chi, Dilan and Elsa each rolled two dice and added the number of dots. Who rolled the largest total?



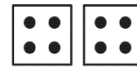
Artur



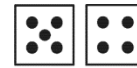
Blessing



Chi



Dilan



Elsa

(A) Artur

(B) Blessing

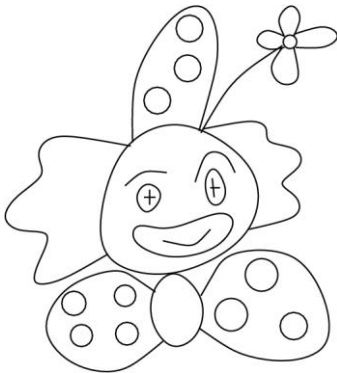
(C) Chi

(D) Dilan

(E) Elsa

2.

What does Harri see when he looks at himself in the mirror?



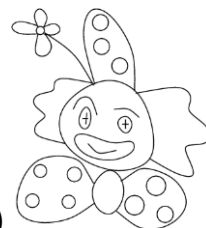
(A)



(B)



(C)



(D)



(E)

3.

Mikael cuts a pizza into quarters. Then he cuts every quarter into thirds. What part of the whole pizza is one piece?

(A) a third

(B) a quarter

(C) a seventh

(D) an eighth

(E) a twelfth



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4.

$17 + 3$



$20 - 16$



+



?

(A) 24

(B) 28

(C) 36

(D) 56

(E) 80

5.

Hanna wants to see a knife on the right side of each plate and a fork on the left side. How many interchanges of a knife and a fork does Hanna need to make?



(A) 1

(B) 2

(C) 3

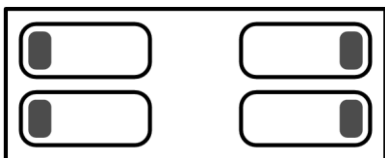
(D) 5

(E) 6

6.

On the left side of the room, Ilona and Tuuli are sleeping with their heads on their pillows facing each other. On the right side of the room, Meri and Taika are sleeping with their heads on their pillows with their backs to each other.

How many girls are sleeping with their right ear on their pillow?



(A) 0

(B) 1

(C) 2

(D) 3

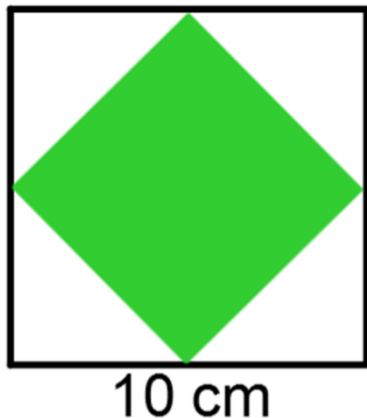
(E) 4



7.

Miranda draws a square with side length 10 cm. She joins the midpoints of the sides to make a smaller square.

What is the area of the smaller square?

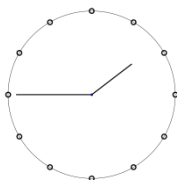


- (A) 10 cm^2 (B) 20 cm^2 (C) 25 cm^2 (D) 40 cm^2 (E) 50 cm^2

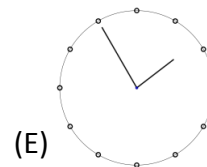
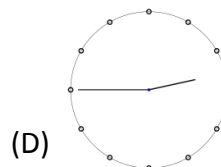
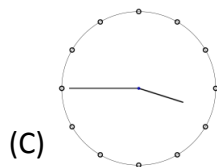
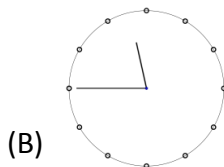
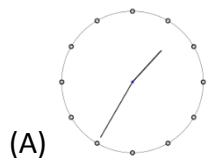
4 points

8.

Teppo is getting his hair cut. When he looks in the mirror, the clock looks like this:



What would he have seen if he had looked in the mirror ten minutes earlier?





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9.

Grandmother bought enough food for her four cats to last for 12 days.

On her way home she brought back two stray cats.

If she gives each cat the same amount of food every day, how many days will the catfood last?

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

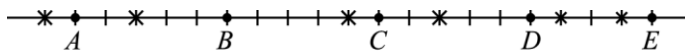
10.

Juho, Viki, and Santtu work at the same summer job. Each day from Monday to Friday exactly two of them come to work. Juho works 3 days per week and Viki works 4 days per week. How many days per week does Santtu work?

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

11.

Five squirrels $A, B, C, D,$ and E are sitting on the line. They pick 6 nuts marked by crosses. At one moment the squirrels start running to the nearest nut at the same speed. As soon as a squirrel picks a nut it starts running to the next closest nut. Which squirrel will get two nuts?



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

12.

The number 2581953764 is written on a strip of paper. Joakim cuts the strip 2 times and gets 3 numbers. Then he adds these 3 numbers. Which is the smallest possible sum he can get?

- (A) 2675 (B) 2975 (C) 2978 (D) 4217 (E) 4298

13.

Timo, Tomi and Timi are triplets, while their brother Simo is 3 years younger. Which of the following numbers could be the sum of the ages of the four brothers?

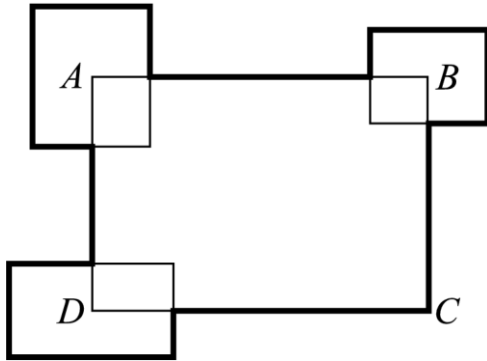
- (A) 53 (B) 54 (C) 56 (D) 59 (E) 60



14.

The perimeter of the rectangle $ABCD$ is 30 cm. Three other rectangles are placed so that their centres are at the points A , B and D (see the figure).

The sum of their perimeters is 20 cm. What is the total length of the thick line shown in the picture?

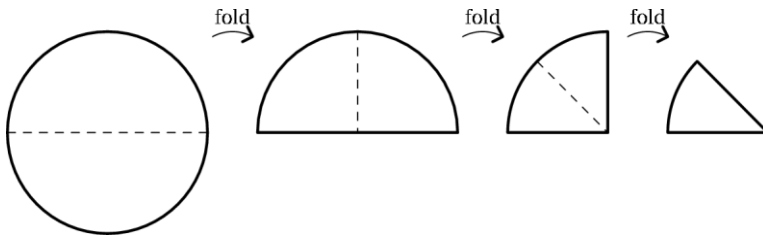


- (A) 50 cm (B) 45 cm (C) 40 cm (D) 35 cm (E) impossible to determine

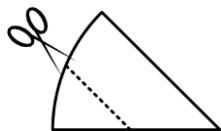
5 points

15.

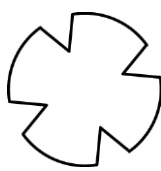
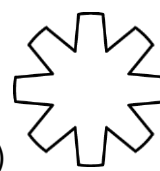
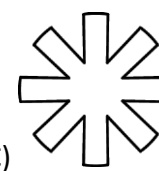
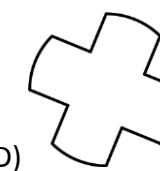
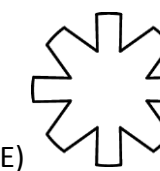
Sami folds a round sheet of paper at the middle. Then he folds it once more and then one last time.



In the end Sami cuts the folded paper along the marked line (see the picture below):



What is the shape of the middle part of the paper when unfolded?

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



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16.

Egor writes down all the numbers with all following properties:

the first digit is 1,

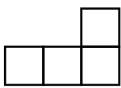
each of the following digits is at least as great as the one before it,

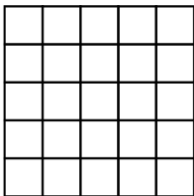
the sum of the digits is 5.

How many numbers does he write?

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

17.

What is the greatest number of shapes of the form  that can be cut out from a 5 × 5 square?








- (A) 2
- (B) 4
- (C) 5
- (D) 6
- (E) 7

18.

A big cube was built of 8 identical small cubes, some black ones and some white ones. Five faces of the big cube are:

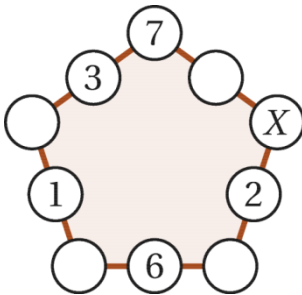


What does the sixth face of the big cube look like?

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

**19.**

Väinö wrote numbers in 5 of the 10 circles as shown in the figure. He wants to write a number in each of the remaining 5 circles such that the sums of the 3 numbers along each side of the pentagon are equal. Which number will he have to write in the circle marked by X ?



(A) 7

(B) 8

(C) 11

(D) 13

(E) 15

20.

The symbols \bigcirc , \square , and \triangle represent 3 different digits.

If you add the digits of the 3-digit number $\bigcirc\square\bigcirc$ the result is the 2-digit number $\square\triangle$.

If you add the digits of the 2-digit number $\square\triangle$, you find the 1-digit number \square .

Which digit does \bigcirc represent?

(A) 4

(B) 5

(C) 6

(D) 8

(E) 9

21.

Little Kanga is playing with his calculator.

He starts with the number 12. He multiplies or divides the number by 2 or 3, altogether 60 times in a row.

Which of the following results cannot be obtained?

(A) 12

(B) 18

(C) 36

(D) 72

(E) 108