



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.

Ilja colours the squares A2, B1, B2, B3, B4, C3, D3 and D4. Which colouring does he get?

	A	B	C	D
1				
2				
3				
4				

(A)

	A	B	C	D
1				
2				
3				
4				

(B)

	A	B	C	D
1				
2				
3				
4				

(C)

	A	B	C	D
1				
2				
3				
4				

(D)

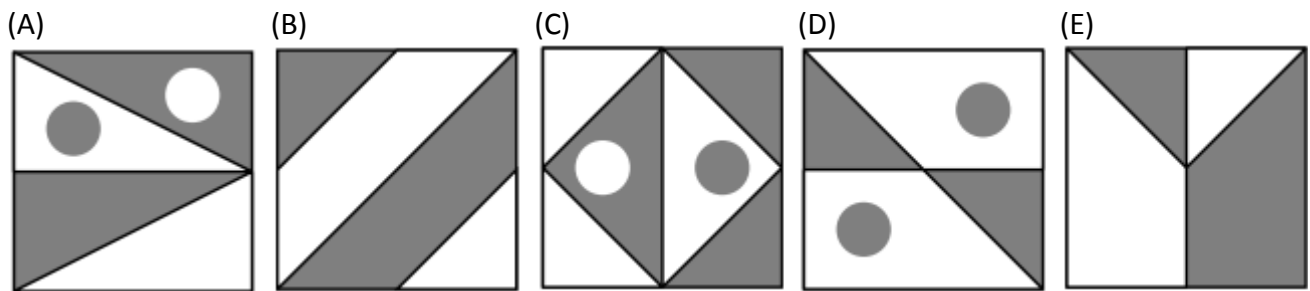
	A	B	C	D
1				
2				
3				
4				

(E)

	A	B	C	D
1				
2				
3				
4				

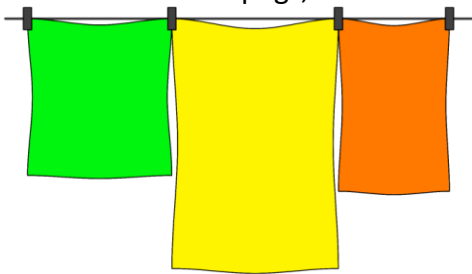
2.

In four of the five pictures the white area is equal to the grey area. In which picture are the white area and the grey area different?



3.

Father hangs the laundry outside on a clothesline. He wants to use as few pegs as possible. For 3 towels he needs 4 pegs, as shown. How many pegs does he need for 9 towels?



- (A) 8 (B) 10 (C) 12 (D) 14 (E) 16

4.

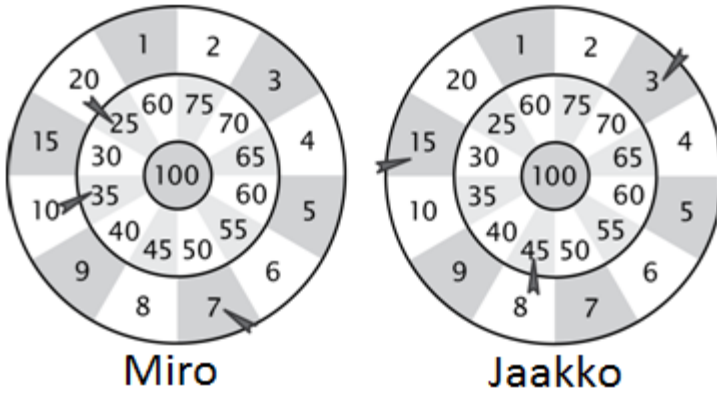
13 children are playing hide and seek. One of them is the "seeker" and the others hide. After a while 9 children have been found. How many children are still hiding?

- (A) 3 (B) 4 (C) 5 (D) 9 (E) 22



5.

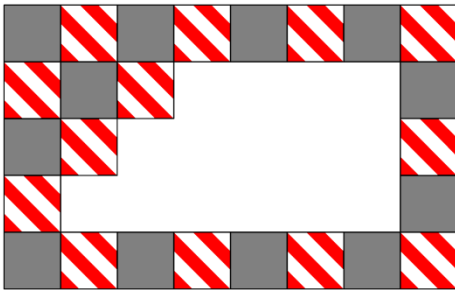
Miro and Jaakko were playing darts. Each one threw three darts (see the picture). Who won and how many more points did he score?



- (A) Miro, he scored 4 points more.
- (B) Miro, he scored 3 points more.
- (C) Miro, he scored 2 points more.
- (D) Jaakko, he scored 2 points more.
- (E) Jaakko, he scored 4 points more.

6.

A repeating rectangular pattern on a wall was created with 2 kinds of tiles: grey and striped. Some tiles have fallen off the wall (see the picture). How many grey tiles have fallen off?



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

7.

The year 2012 is a leap year, which means there are 29 days in February. On Kangaroo Day (15th March 2012) the ducklings of my grandfather are 20 days old. When did they hatch from their eggs?

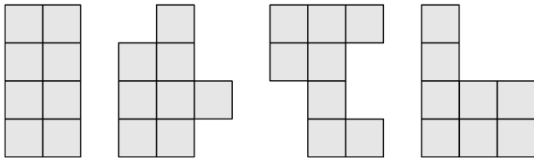
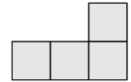
- (A) February 19th
- (B) February 21th
- (C) February 23th
- (D) February 24th
- (E) February 26th



4 points

8.

You have L-shaped tiles, each consisting of 4 squares as shown on right. How many of the following shapes can you make by gluing together two of these tiles?



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

9.

Grandmother made 20 gingerbread biscuits for her grandchildren. She decorated them with raisins and nuts. First she decorated 15 biscuits with raisins and then 15 biscuits with nuts. At least how many biscuits were decorated with both raisins and nuts?

- (A) 4 (B) 5 (C) 6 (D) 8 (E) 10

10.

In a sudoku the numbers 1, 2, 3, 4 can occur only once in each column and in each row. In the mathematical sudoku below Patrick first writes in the results of the calculations. Then he completes the sudoku. Which number will Patrick put in the grey cell?

1×1		1×3	
2×2	$6 - 3$		$6 - 5$
$4 - 1$	$1 + 3$	$8 - 7$	
$9 - 7$	$2 - 1$		

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

11.

Among Nina's classmates there are twice as many girls as boys. Which of the following numbers can be equal to the number of all children in her class?

- (A) 20 (B) 24 (C) 25 (D) 29 (E) 30



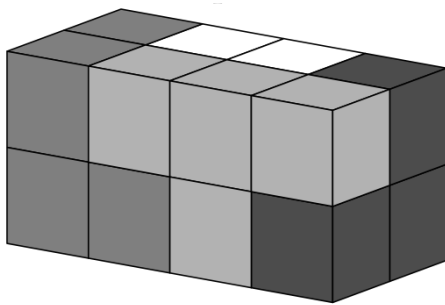
12.

In the animals' school 3 kittens, 4 ducklings, 2 goslings and several lambs are taking lessons. The teacher bat found out that the pupils have 44 legs altogether. How many lambs are there among the pupils?

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

13.

A cuboid is made of four pieces as shown. Each piece consists of four cubes and is a single colour. What is the shape of the white piece?



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

14.

At a Christmas party there was exactly one candlestick on each of the 15 tables. There were 6 five-branched candlesticks, the rest of them were three-branched ones. How many candles had to be bought for all the candlesticks?

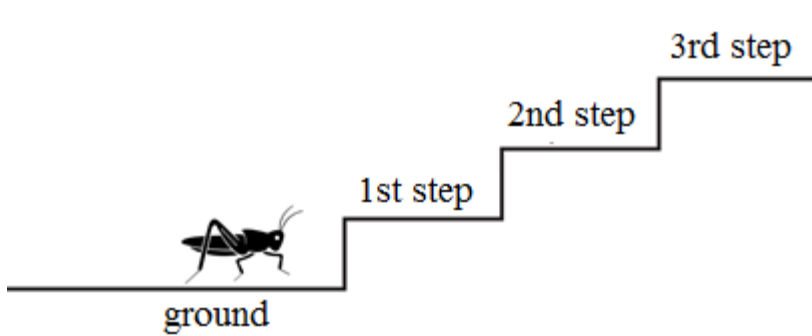
- (A) 45 (B) 50 (C) 57 (D) 60 (E) 75



5 points

15.

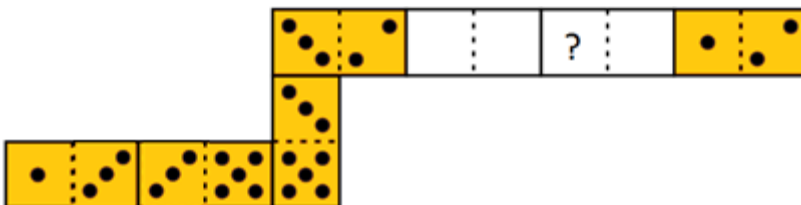
A grasshopper wants to climb a staircase with many steps. She makes only two different jumps: 3 steps up or 4 steps down. Beginning at the ground level, at least how many jumps will she have to make in order to take a rest exactly on the 22th step?



- (A) 7 (B) 9 (C) 10 (D) 12 (E) 15

16.

Tiina made a domino snake of seven tiles. She put the tiles next to each other so that the sides with the same number of dots were touching. Originally the snake had 39 dots on its back. However, her brother Reijo took away two tiles from the snake (see the picture). How many dots were in the place with the question mark?



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

17.

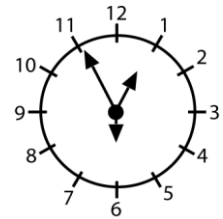
Laura, Iiro, Valpuri and Katriina want to be in one photo together. Katriina and Laura are best friends and they want to stand next to each other. Iiro wants to stand next to Laura because he likes her. In how many possible ways can they arrange for the photo?

- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7

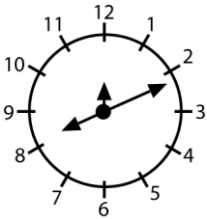


18.

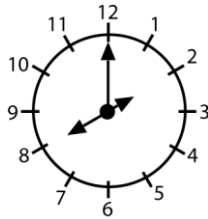
A special clock has 3 hands of different length (for hours, for minutes, and for seconds). We do not know which hand is which, but we know that the clock runs correctly. At 12:55:30 PM the hands were in position depicted on the right. How will this clock look like at 8:11:00 AM?



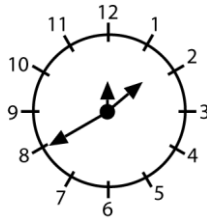
(A)



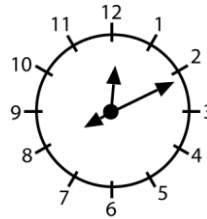
(B)



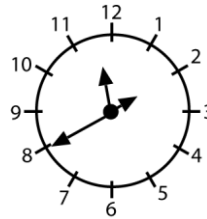
(C)



(D)



(E)



19.

Mikko chose a number, multiplied it by itself, added 1, multiplied the result by 10, added 3, and multiplied the result by 4. His final answer was 2012. Which number did Mikko originally choose?

(A) 5

(B) 7

(C) 8

(D) 9

(E) 11

20.

In a soccer game the winner gains 3 points, while the loser gains 0 points. If the game is a draw, then the two teams gain 1 point each. After playing 38 games, FC Kangaroo has 80 points. Find the greatest possible number of games that FC Kangaroo has lost.

(A) 12

(B) 11

(C) 10

(D) 9

(E) 8

21.

A rectangular paper sheet measures 192 x 84 mm. You cut the sheet along just one straight line to get two parts, one of which is a square. Then you do the same with the non-square part of the sheet, and so on as long as possible. What is the length of the side of the smallest square you get with this procedure?

(A) 1 mm

(B) 4 mm

(C) 6 mm

(D) 10 mm

(E) 12 mm