Problem Kangur_2004_0304_1 (3 pts) http://www.mathkangaroo.org

2001+ 2002 + 2003 + 2004 + 2005 =

A) 1,015
B) 5,010
C) 10,150
D) 11,005
E) 10,015

Problem Kangur_2004_0304_2 (3 pts) http://www.mathkangaroo.org

Marek was 4 years old when his sister was born. Today he blew out all 9 candles on his birthday cake. What is the difference between Marek's and his sister's age today?

A) 4 years
B) 5 years
C) 9 years
D) 13 years
E) 14 years

Problem Kangur_2004_0304_3 (3 pts) http://www.mathkangaroo.org

The picture below shows a road from town A to town B (indicated by solid line) and a detour (marked by a dash line) caused by renovation of the section CD. How many kilometres longer is the road from town A to town B because of the detour now?

A) 3 km
B) 5 km
C) 6 km
D) 10 km
E) This cannot be calculated.

Problem Kangur_2004_0304_4 (3 pts) http://www.mathkangaroo.org

Which of the results below is not identical to the difference 671 - 389?

A) 771 - 489
B) 681 - 399
C) 669 - 391
D) 1871 - 1589
E) 600 - 318

**Problem Kangur_2004_0304_5** (3 pts) http://www.mathkangaroo.org

There were some birds sitting on the telegraph wire. At one moment, 5 of them flied away and after some time, 3 birds came back. At that time there were 12 birds sitting on the wire. How many birds were there at the very beginning?

A) 8
B) 9
C) 10
D) 12
E) 14

Problem Kangur_2004_0304_6 (3 pts) http://www.mathkangaroo.org

Which numbers are inside a rectangle and inside a circle but not inside a triangle at the same time?
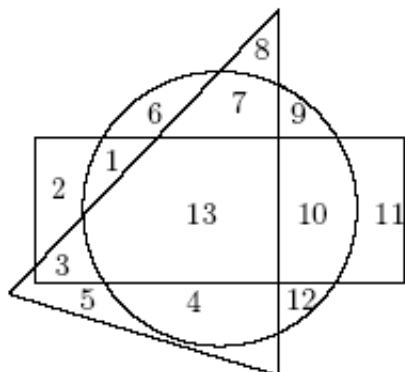
A) 5 and 11
B) 1 and 10
C) 13
D) 3 and 9
E) 6, 7 and 4

Problem Kangur_2004_0304_7 (3 pts) http://www.mathkangaroo.org

Buildings on Color Street are numbered from 1 to 5 (see the picture). Each building is colored with one of the following colors: blue, red, yellow, pink, and green. It is known that:
- The red building neighbours with the blue one only.
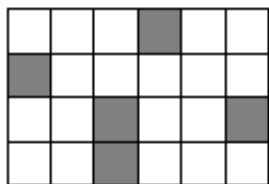- The blue building is between the red one and the green one.
What is the color of the building numbered with 3?

A) Blue
B) Red
C) Yellow
D) Pink
E) Green

**Problem Kangur_2004_0304_8** (3 pts) http://www.mathkangaroo.org

How many white squares need to be shaded so that the number of shaded squares equals exactly to half of the number of white squares?

A) 2
B) 3
C) 4
D) 6
E) It is impossible to calculate it.

**Problem Kangur_2004_0304_9** (4 pts) http://www.mathkangaroo.org

Five identical sheets of a plastic rectangles were divided into white and black squares. Which of the sheets from A) to E) has to be covered with the sheet to the right in order to get totally black rectangle?
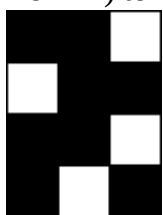
A)   B)   C)   D)   E)

**Problem Kangur_2004_0304_10** (4 pts) http://www.mathkangaroo.org

The scales in the pictures had been balanced. There are pencils and a pen on the arms of the scales. What is the weight of the pen in grams?
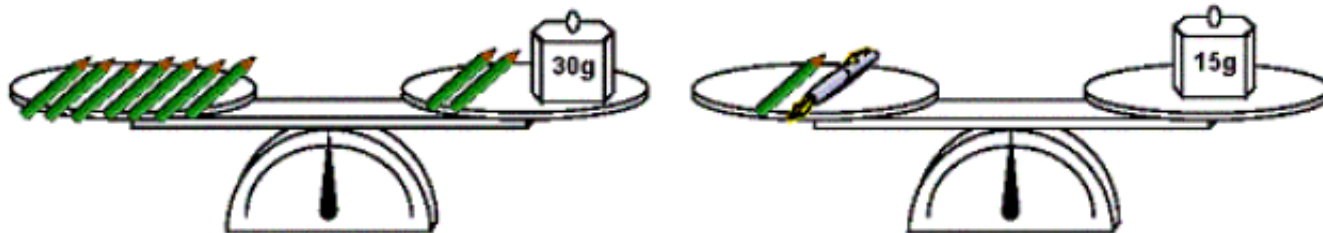
A) 6 g
B) 7 g
C) 8 g
D) 9 g
E) 10 g

Problem Kangur_2004_0304_11 (4 pts) http://www.mathkangaroo.org

I notice four clocks on the wall (see the picture). Only one of them shows correct time. One of them is 20 minutes ahead, another is 20 minutes late, and the other is stopped. What is the time at the moment?
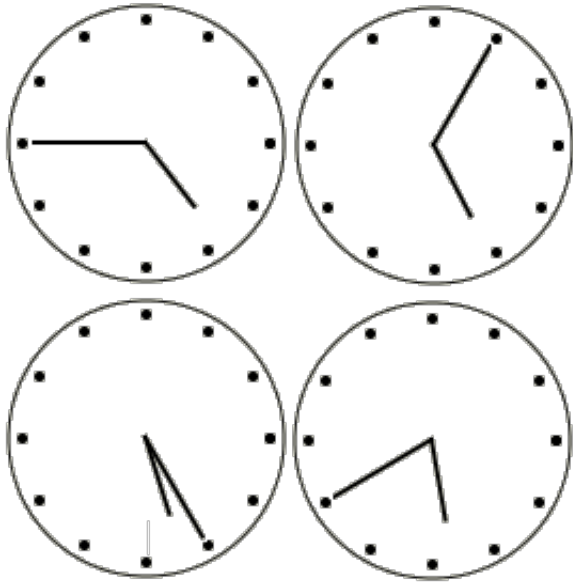
A) 4:45
B) 5:05
C) 5:25
D) 5:40
E) 12:00

Problem Kangur_2004_0304_12 (4 pts) http://www.mathkangaroo.org

Ella brought a basket of apples and oranges for a birthday party. Guests ate half of the apples and the third part of the oranges. In the basket remained:

A) Half of all fruits
B) More than half of all fruits
C) Less than half of all fruits
D) A third part of all fruits
E) Less than a third part of all fruits

Problem Kangur_2004_0304_13 (4 pts) http://www.mathkangaroo.org

Ania divided a certain number by 10 instead of multiplying it by 10. As a result she got 600. What would the result have been if she hadn't made that mistake?

A) 6
B) 60
C) 600
D) 6,000
E) 60,000

Problem Kangur_2004_0304_14 (4 pts) http://www.mathkangaroo.org

Kathy found a book, which was lack of certain number of sheets. When she opened the book she saw number 24 on the left side and number 45 on the right side. How many sheets between those sides were missing?

A) 9
B) 10
C) 11
D) 20
E) 21

Problem Kangur_2004_0304_15 (4 pts) http://www.mathkangaroo.org

Eva is 52 days older than her girlfriend Ania. Eva had her birthday on Tuesday in March of this year. On which day of the week will Ania celebrate her birthday this year?

A) Monday
B) Tuesday
C) Wednesday
D) Thursday
E) Friday

Problem Kangur_2004_0304_16 (4 pts) http://www.mathkangaroo.org

Into the squares of diagram numbers were placed so that the sum of the numbers in the first row is equal to so that the sum of the numbers in the first row is equal to 3, the sum of the numbers in the second row is equal to 8, and the sum of the numbers in the first column is equal to 4. What is the sum of the numbers in the second column?


A) 4
B) 6
C) 7
D) 8
E) 11

Problem Kangur_2004_0304_17 (5 pts) http://www.mathkangaroo.org

The cube (see the picture) is colored with three colors so that every side of this cube is one color and every two opposite sides are the same color. From which of the patterns below this kind of cube can be made?

Problem Kangur_2004_0304_18 (5 pts) http://www.mathkangaroo.org

Four square tiles were arranged in a way shown in the picture. The lengths of the sides of two tiles are indicated in the picture. What is the length of the side of the largest tile?
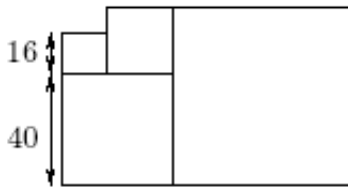
A) 24
B) 56
C) 64
D) 81
E) 100

Problem Kangur_2004_0304_19 (5 pts) http://www.mathkangaroo.org

Girls and boys from Maria's and Mathew's class have formed a line. There are 16 students on Maria's right, and Mathew is among them. There are 14 students on Mathew's left, and Maria is among them. There are 7 students between Maria and Mathew. How many students are in this class?

A) 37
B) 30
C) 23
D) 22
E) 16

**Problem Kangur_2004_0304_20** (5 pts) http://www.mathkangaroo.org

The sum of the digits of the 10-digit number is 9.What is the product of the digits of this number?

A) 0
B) 1
C) 45
D) 9 x 8 x 7 x ... x 2 x 1
E) 10

Problem Kangur_2004_0304_21 (5 pts) http://www.mathkangaroo.org

Out of 125 small, white and black cubes, the big cube was formed (see the picture). Every two adjacent cubes have different colors. The vertices of the big cube are black. How many white cubes does the big cube contain?
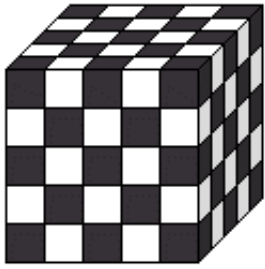
A) 62
B) 63
C) 64
D) 65
E) 68

Problem Kangur_2004_0304_22 (5 pts) http://www.mathkangaroo.org

A lottery-ticket was 4 dollars. Three boys: Paul, Peter, and Robert made a contribiution and bought two tickets. Paul gave 1 dollar, Peter gave 3 dollars, and Robert gave 4 dollars. One of the tickets they bought was worth 1000 dollars. Boys shared the award fairly, meaning, proportionally to their contributions. How much did Peter receive?

A) 300
B) 375
C) 250
D) 750
E) 425

Problem Kangur_2004_0304_23 (5 pts) http://www.mathkangaroo.org

In three soccer games the Dziobak's team scored three goals and lost one. For every game won the team gets 3 points, for a tie it gets 1 point, and for the game lost it gets 0 points. For sure, the number of points the team earned in those three games was not equal to which of the following numbers?

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

Problem Kangur_2004_0304_24 (5 pts) http://www.mathkangaroo.org

In every white section of a diagram, the products of two numbers from grey sections - one from above and one from the left - was placed (for example: 42 = 7 · 6). Some of these products are represented by letters. Which two letters represent the same number?

•				7
	J	K	L	56
	M	36	8	N
	T	27	6	P
6	18	R	S	42

A) L and M
B) T and N
C) R and P
D) K and P
E) M and S