Ecoliers 2004

3 points

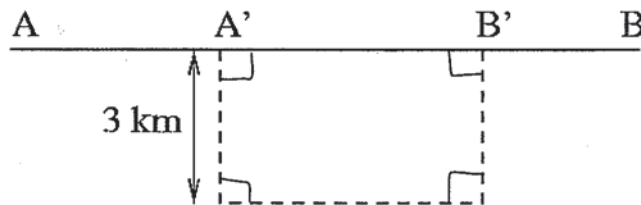**1** $2001 + 2002 + 2003 + 2004 + 2005 = ?$

   A: 1015   B: 5010   C: 10150   D: 11005   **E**: 10015

2   Jerôme was 4 years old when his sister was born. To-day he blows his 9 birthday candles. What is the age difference between him and his sister :

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

3   At the picture below you can see a road from town A to town B (a solid line), and a detour of a renovated interval A'B', marked as a dashed line. How many kilometers further does one have to travel using the detour?
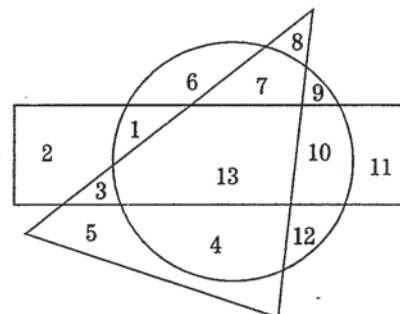

A.   3 km.
B.   5 km
C   6 km
D.   10 km
E.   This is impossible to calculate

4   There are swallows at a telegraphic wire. At some moment 5 of them flew away, and in some time 3 swallows come back. It turned out that 12 swallows there were at the wire. How many swallows there were at the wire at the very beginning?
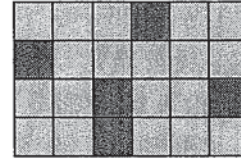
A. 8   B. 9   C. 10   D. 12   **E**. 14

5 Which numbers are written in an area that belongs to the rectangle and to the disk but doesn't belong to the triangle?

   A: 5 and 11   **B**: 1 and 10   C: 13   D: 3 and 9   E: 6, 7 and 4

6 How many grey squares must you paint in black colour so that the number of black squares be exactly the half of grey squares?

    A. 2   **B. 3**   C. 4   D. 6   E. it's impossible to reach

7 The boys and girls of the class of Maria and Narcís have put themselves in "one line row". Maria has 16 students at her back, one of them Narcís. Narcís has 14 students ahead, one of them Maria. Between Maria and Narcís there are 7 students. How many students are there, altogether, in the class of Maria and Narcís ?

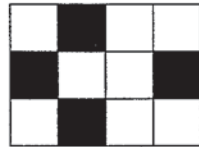   A.- 37   B.- 30   **C.- 23**   D.- 22   E.- 16

8 Which of the rectangles (A) to (E) can be covered by the pattern on the right hand side in such a way that the result is a totally black or totally white rectangle?
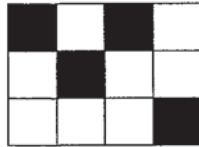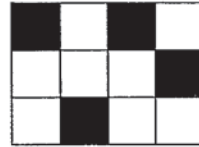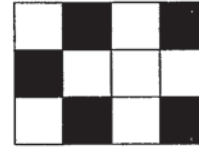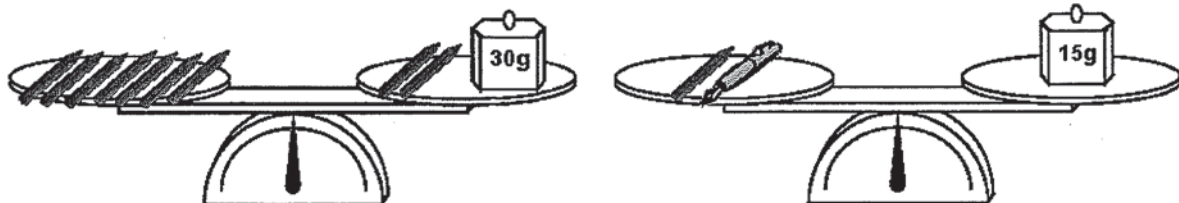

A: B: C: **D:**   E:
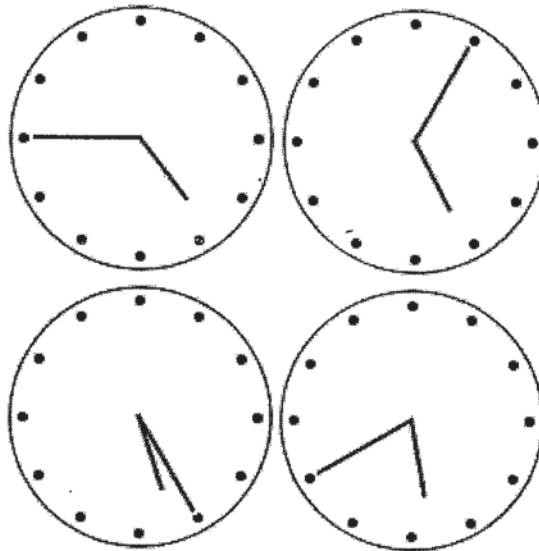

4 points

9 How many grams does the pen weight?

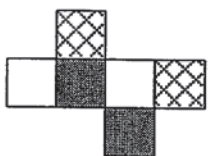   A) 6g   B) 7g   C)8g   **D) 9g**   E) 10g

10 In this picture there is what I saw in four different clocks at the same moment
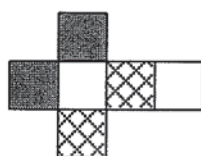

Only one of them was in the right time. Another was 20 minutes ahead. Another 20 minutes late. Finally, another was stopped. What was the right time?
A.- 4 hours and 45 minutes
B.- 5 hours and 5 minutes
C.- 5 hours and 25 minutes
D.- 5 hours and 40 minutes
E.- It's impossible to determinate

11 Gabriella brings to Joseph a basket with apples and oranges. Joseph has eaten a half of all apples and one third of all oranges. Which part of the fruits remained in the basket?
A) a half of all fruits;   B) more then half of all fruits;   C) less then half of all fruits;
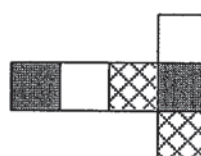D) one third of all fruits;   E) less then one third of all fruits.

12 A cube (on the right) is colored with three colors, so that each face has exactly one color and the opposite faces have the same color. Which of the following developments is the development of this cube?
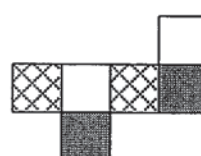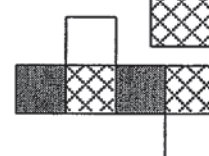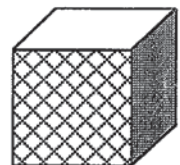

A)   B)   C)   D)   E)

13 Karin has found an old book with some missing pages. On a left-hand page the page number is 24 and the following right-hand page is numbered 45. How many sheets are missing in between?
A 9   B 10   C 11   D 20   E 21

14 Ruby is 52 days older than her classmate Izzy. This year Ruby celebrated her birthday on a Tuesday in March. On which day in the week did Izzy celebrated her birthday this year ?

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

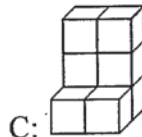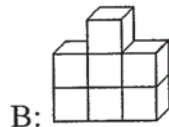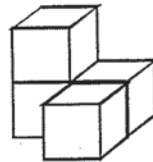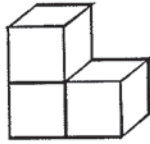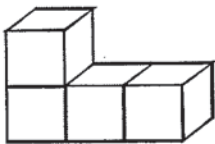**15** Which alternative is not equal to $671 - 389$?

     A) $771 - 489$ B) $681 - 399$ C) $669 - 391$

     D) $1871 - 1589$ E) $600 - 318$

16 Inside each of the four squares of a 2×2 grid a number is written. If the sum of the numbers of the first line is 3, the sum of the numbers of the second line is 8 and the sum of the numbers of the first column is 4, what is the sum of the numbers in the second column?

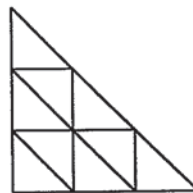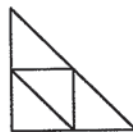   A: 4   B: 6   C: 7   D: 8   E: 11

5 points

17 All figures are made with 7 cubes. Which figure among the ones on the table can not be constructed with the help of two of 4 given elements ?
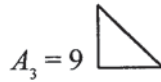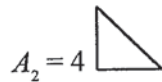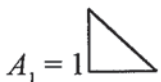

A: B: C:
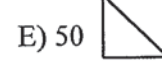
D: **E: all figures can be constructed**

18

$A_1 = 1$ $A_2 = 4$ $A_3 = 9$ $A_5 = ?$

     A) 15   B) 20   C) 25   D) 30   E) 50

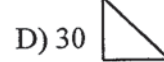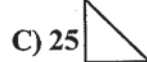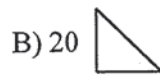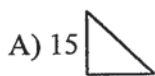**19** There are five houses on Colour Street : a blue, a red, a yellow, a pink and a green one. The houses are numbered from 1 to 5 (see picture).

- The blue and yellow houses are even numbered.
- The red house is the neighbour of the blue house only.
- The blue house stands between the green and red houses.

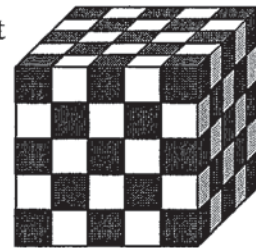Which colour is the house with number three?

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

20 The sum of the digits of a ten-digit number is equal to 9. What is the product of the digits of this number?

    A) 0;   B) 1;   C) 45;
    D) $9 \cdot 8 \cdot 7 \cdot ... \cdot 2 \cdot 1$;   E) depends of the digits of the given number.

21 A cube with the side 5 consists of black and white unit cubes, so that any two adjacent (by faces) unit cubes have different color, the corner cubes being black. How many white unit cubes are used?

    A) 62   **B) 63**   **C) 64**   **D) 65**   **E) 68**

22 To make concrete, mix 4 shovels of stone, 2 shovels of sand and 1 shovel of cement. The number of shovels of stone required to make 350 shovels of concrete is:

    A) 200   B) 150   C) 100   D) 87,5   E) 50

23 After three games of the soccer championship, Platypus United has scored three goals and received one. They get three points for a win, one point for a draw and no points for a loss. How many points can they not have right now?

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

24 This is a products table. What two letters represents the same number ?

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

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

Benjamins 2004

3 points

1. How much is 1000-100+10-1 ?

    A) 111   B) 900   **C) 909**   D) 990   E) 999

2. Minous has 16 cards: 4 spades (♠), 4 clubs (♣), 4 diamonds (♦) and 4 hearts (♥). She wants to put them down in the square below, in such a way that every row and every column has a card of each sort. In the square below you see how she started. What sort must be put in the place of the question mark?

    A. ♠   B. ♣   C. ♦   D. ♥   E. you can't be sure

3 . $(10 \times 100) \times (20 \times 80) =$

    A) 20000×80000 B) 2000×8000 C) 2000×80000
    D) 20000×8000 **E) 2000×800**

4. 360 000 seconds is the same as :

    A) 3 hours   B) 6 hours   C) 8.5 hours   D) 10 hours   **E) more than that**

5. Edward collects 2004 pine cones. He sorts them into piles of five cones each. How many five-cone piles can he get ?

    A) 5   **B) 400**   C) 401   D) 402   E) 404

6. Which of the rectangles (A) to (E) can be covered by the pattern on the right hand side in such a way that the result is a totally black or totally white rectangle?
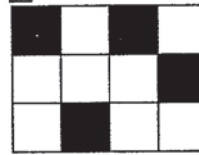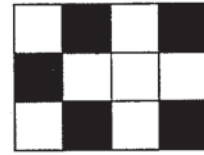

    A: B: C: **D:**   E:

7. Which of the following is *not* a factor of 2004 ?

    A) 3   B) 4   C) 6   **D) 8**   E) 12