

MATHEMATICS KANGAROO 2013

Austria - 21.3.2013

Group: Écolier, Grades: 3-4

Name:	
School:	
Class:	

Time allowed: 60 min.

Each correct answer, questions 1.-8.: 3 Points

Each correct answer, questions 9.-16.: 4 Points

Each correct answer, questions 17.-24.: 5 Points

Each question with no answer given: 0 Points

Each incorrect answer: Lose $\frac{1}{4}$ of the points for that question.

You begin with 24 points.



Please write the letter (A, B, C, D, E) of the correct answer under the questions number (1 to 24)
Write neatly and carefully!

1	2	3	4	5	6	7	8

9	10	11	12	13	14	15	16

17	18	19	20	21	22	23	24

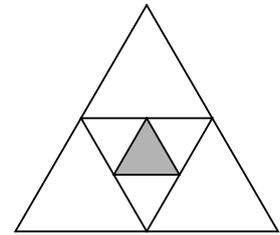
Information on the Kangaroo contest: www.kaenguru.at
If you want to do more in this area, check out the Austrian
Mathematical Olympiad. Info at: www.oemo.at

19. Andi, Betti, Clara and Dani were born in the same year. Their birthdays are on the 20th February, 12th April, 12th May and 25th May, but not necessarily in that order. Betti and Andi were born in the same month. Andi and Clara were born on the same day in different months. Who is the oldest?

- (A) Andi (B) Betti (C) Clara (D) Dani
 (E) There is not enough information to answer the question.

20. If I join the midpoints of the sides of the large triangle in the picture, a small triangle is formed. If I join the midpoints of the sides of this small triangle, a tiny triangle is formed. How many of these tiny triangles can fit into the largest triangle at the same time?

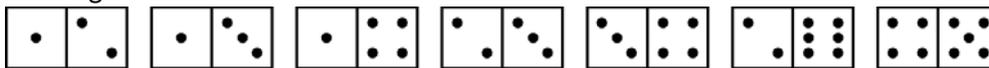
- (A) 5 (B) 8 (C) 10 (D) 16 (E) 32



21. Chrissi wants to sell 10 glass marbles which each have a different weight. Their weights are: 1 dag, 2 dag, 3 dag, 4 dag, 5 dag, 6 dag, 7 dag, 8 dag, 9 dag and 10 dag. They should be packed into bags two at a time, so that each bag has the same weight. Which two marbles will be put into the same bag?

- (A) 3 and 6 (B) 3 and 7 (C) 3 and 8 (D) 3 and 9 (E) 3 and 10

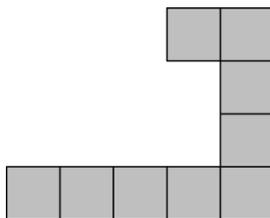
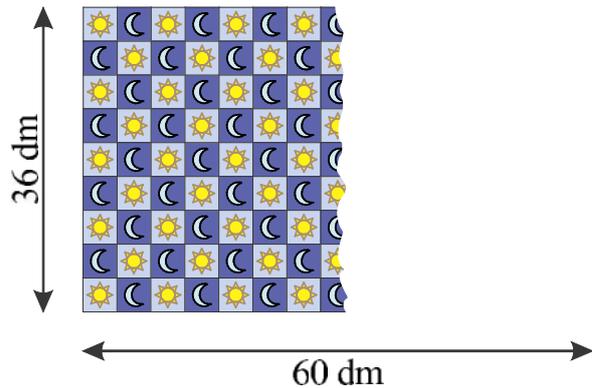
22. Baris has a few dominoes as shown in the picture. He wants to lay them in a line according to the rules of dominoes, that is that two dominoes can only be laid together if the neighbouring squares have the same number of dots in them. What is the biggest number of these dominoes that he can lay in a single line?



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

23. Peter has bought a rug that is 36 dm wide and 60 dm long. On the rug you can see squares that contain either a sun or a moon, as shown in the picture. As you can see there are exactly nine squares along the width of the rug. The total length of the rug cannot be seen. How many moons would you see, if you could see the entire rug?

- (A) 68 (B) 67 (C) 65 (D) 63 (E) 60



24. Beatrice has a few grey tiles that all look exactly like the one pictured. At least how many of these tiles does she need in order to make a complete square? (A) 3 (B) 4 (C) 6 (D) 8 (E) 16