Year 3 and 4 (ENGLISH VERSION)

Thursday, 19th March 2020   Time allowed: 75 minutes

1. For each question exactly one of the 5 options is correct.
2. Each participant is given 24 points at the beginning. For each correct answer 3, 4 or 5 points are added. No answer means 0 points are added. If a wrong answer is given, one quarter of the points is subtracted, i.e. 0.75 points, 1 point or 1.25 points, respectively. At the end, the maximum number of points is 120, the minimum is 0.
3. Calculators and other electronic devices are not allowed.

3 point problems

A1 In front of Lisa's window a big mushroom is growing. Every day from Monday to Friday, Lisa takes a photo. Which photo does she take on Thursday?

(**A**)   (**B**)   (**C**)   (**D**)   (**E**)
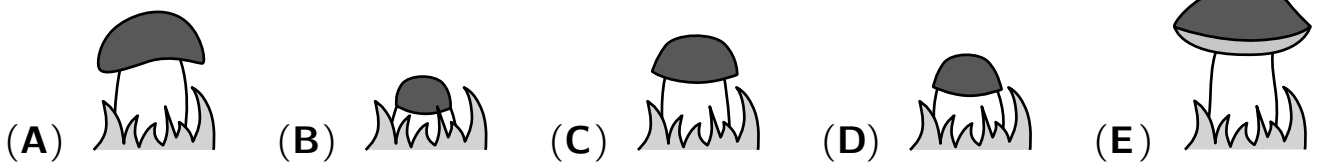
A2 Jakob colours all the petals whose result is 20. Which pattern does he obtain?

(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

Petals: $16 - 4$, 2×10, $6 + 14$, 7×3, $40 : 2$
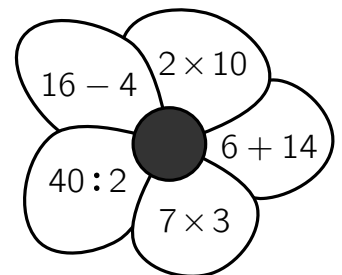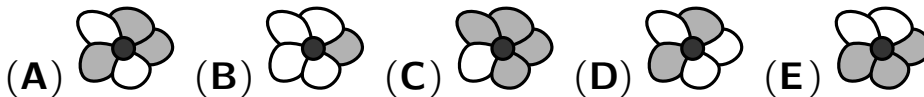
A3 The pizzeria "Napolitano" is open every week from Wednesday to Sunday, each day from 4 p.m. to 10 p.m. How many hours per week is the pizzeria open?

(**A**) 25   (**B**) 28   (**C**) 30   (**D**) 32   (**E**) 35

A4 Elli stands in the square of numbers on the field with the number 1. She keeps on jumping to a neigbouring number that is by 3 larger as long as this is possible. Where will Elli finish?
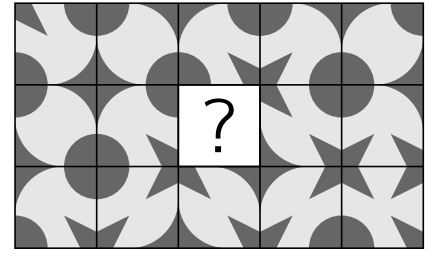
1	5	8	11
4	7	10	14
24	23	13	18
21	19	16	20

(**A**) on 11   (**B**) on 13   (**C**) on 18   (**D**) on 19   (**E**) on 21

A5 Which picture would you obtain if in the picture on the right the grey squares were white and the white squares were grey?

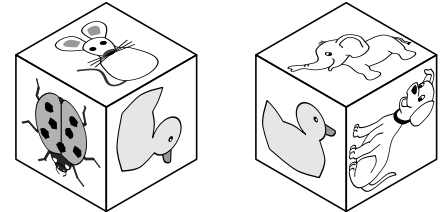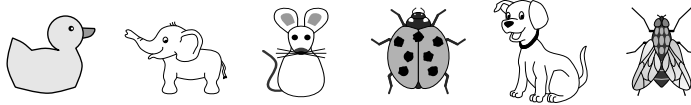(**A**)   (**B**)   (**C**)   (**D**)   (**E**)
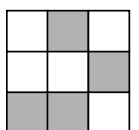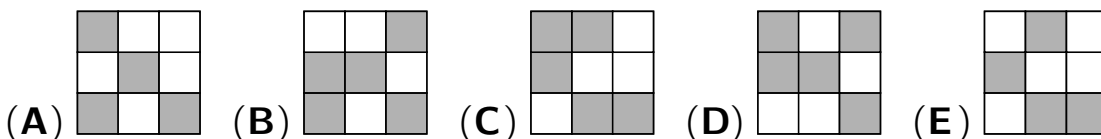
A6 The puzzle pieces on the right form a pattern of regular figures. Which piece belongs in the gap?

(**A**)　(**B**)　(**C**)　(**D**)　(**E**)

A7 Lilli's grandmother bakes 24 muffins. For 6 muffins she needs 2 eggs. She buys eggs in boxes of 6 eggs. How many such boxes must she buy?

(**A**) 1　　(**B**) 2　　(**C**) 3　　(**D**) 4　　(**E**) 8

**A8** Stefan decorates a die with 6 animal stickers:

The die is shown twice. Which sticker is on the opposite side of the duck?

(**A**) the elephant　(**B**) the mouse　(**C**) the ladybird　(**D**) the dog　(**E**) the fly

4 point problems

B1 Til colours each region in the diagram either red, blue or yellow. He colours regions that touch each other with different colours. He colours the outer region red. How many regions in total will be coloured red?

(**A**) 1　　(**B**) 2　　(**C**) 3　　(**D**) 4　　(**E**) 5
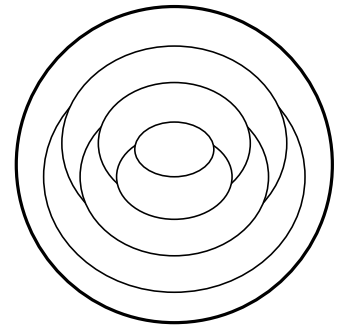
B2 On a standard die the numbers of dots on each pair of opposite sides add up to 7. A standard die rolls on a paper strip, as shown. What does the standard die look like on the last field of the strip?

(**A**)　(**B**)　(**C**)　(**D**)　(**E**)
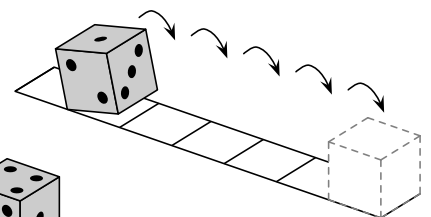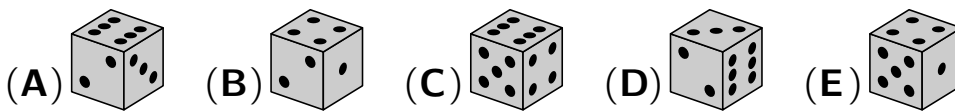
B3 Kangaroo Pit is standing in front of a long staircase with 35 steps. Rabbit Ulla sits on the uppermost step. Pit always jumps 5 steps up at once. Simultaneously Ulla jumps 2 steps down. On which step do Pit and Ulla meet?

(**A**) on the 20th　(**B**) on the 23rd　(**C**) on the 25th　(**D**) on the 27th　(**E**) on the 28th

B4 Anna-Lena observes the pyramide from above. What could she see?

(**A**)　(**B**)　(**C**)　(**D**)　(**E**)
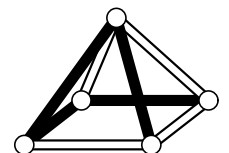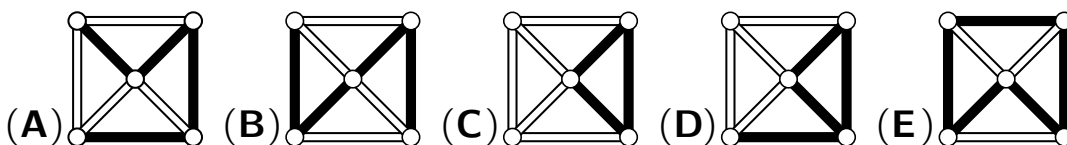
**B5** During the holidays Lea read 3 books. Jan read 3 times as many books as Lea. Tamo read 3 books more than Lea. Karla read 3 books less than Jan. Which two children read the same number of books during the holidays?

(**A**) Lea and Karla (**B**) Tamo and Karla

(**C**) Jan and Tamo (**D**) Lea and Tamo

(**E**) Jan and Karla

B6 Using the same game pieces the ring on the right should be completed. Neighbouring game pieces must touch with the same number. Which number will lie on the question mark?

(**A**) 1 (**B**) 2 (**C**) 3 (**D**) 4 (**E**) 5
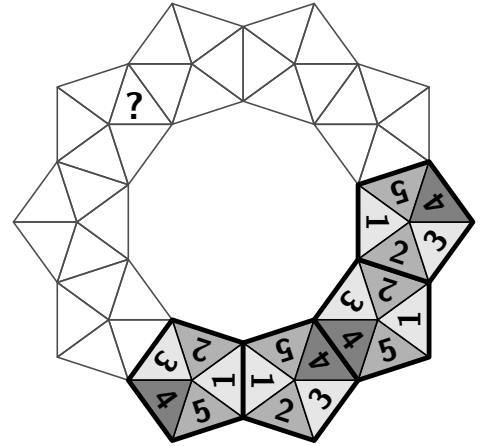
B7 The three pandas in the zoo are 24, 13 and 7 years old. When they are in total 50 years old, a party will be held. What will be the age of one of the pandas at this party?

(**A**) 9 years (**B**) 11 years (**C**) 13 years (**D**) 17 years (**E**) 23 years

B8 The shapes in the diagram cover the numbers from 1 to 8. The numbers under the triangles add up to 10, and the numbers under the squares add up to 20. Which number is covered by the circle?

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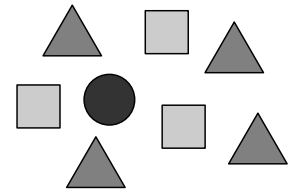
5 point problems

C1 After school we bought some ice cream, one scoop for each of us. We ordered 3 scoops of vanilla, 2 scoops of chocolate and one scoop of walnut. The ice cream seller put one topping on <u>each</u> scoop. He used 3 cherries, 2 wafers and 1 chocolate chip. All decorated scoops were different. Which of the following combinations was <u>not</u> served?

(**A**) walnut with a wafer (**B**) chocolate with a cherry (**C**) vanilla with a cherry

(**D**) chocolate with a wafer (**E**) vanilla with a chocolate chip

C2 Hugo has two types of sticks. The short ones are 10 cm long, the long ones 30 cm. Hugo takes some of the sticks and notices that he can put them together to form a square without laying sticks on top of each other. Which sticks could he have taken?

(**A**) 5 short and 2 long sticks (**B**) 6 short sticks (**C**) 4 short and 2 long sticks

(**D**) 6 long sticks (**E**) 3 short and 3 long sticks

C3 Our dachshund is tied to our wooden hut which is 7 meters long and 5 meters wide. On the other side there are 5 treats, as seen in the picture from above. The leash is 11 meters long and tied exactly 1 meter from the corner. How many treats can our dachshund reach?
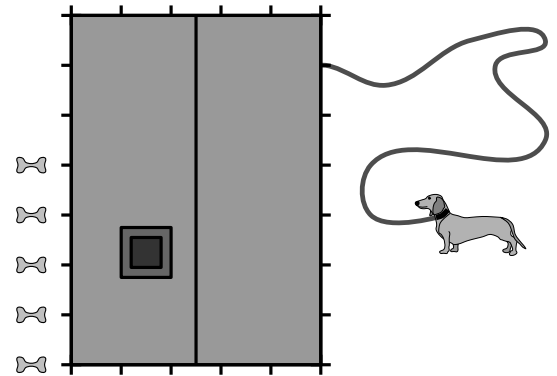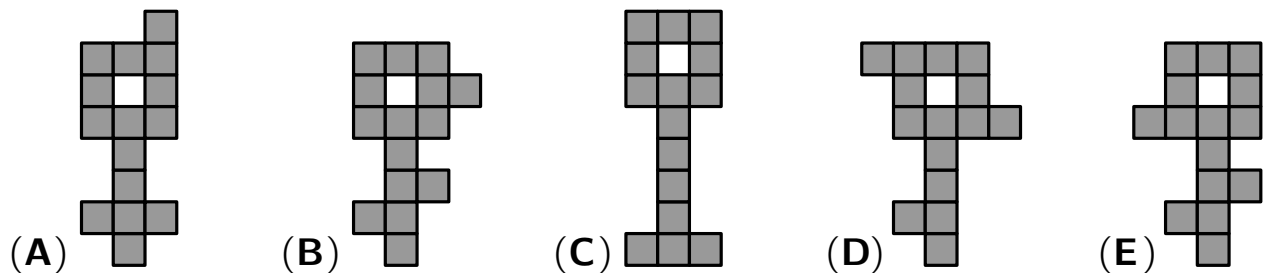
(**A**) 5   (**B**) 4   (**C**) 3   (**D**) 2   (**E**) 1

C4 There are 43 children enrolled for the dodgeball championship at school. Mrs Heine divides the children into teams of 5 and teams of 6. How many teams are there?

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

C5 Four of the following "keys" can be cut into <u>three different</u> pieces, each consisting of 5 boxes. One "key" <u>cannot</u> be cut this way. Which one?

(**A**)   (**B**)   (**C**)   (**D**)   (**E**)

C6 René the sloth wants to paint the 3 toenails of his right foot. René has red, green and blue nail polish. Neighbouring toenails should be painted differently, that is for sure. How many possibilities are there for René to paint the 3 toenails this way?

(**A**) 8   (**B**) 9   (**C**) 12   (**D**) 18   (**E**) 24

C7 Our new student has 3 first names. During the break we are guessing her name:

"Are you Ada Lilo Cleo?" "Are you Ada Lara Cora?" "Are you Alea Lara Cleo?"

She responds: "Each time <u>exactly one</u> of my 3 first names was right — and also its position was right." What is our new student's name?

(**A**) Ada Lilo Cora   (**B**) Alea Lara Cora   (**C**) Ada Lara Cleo
(**D**) Alea Lara Cleo   (**E**) Alea Lilo Cora

C8 Anne replaces each of the letters in the calculation by a digit from 1 and 9. The same letters are substituted $$STR - OHH + UT = ?$$ by the same digits and different letters by different digits. What is the <u>largest</u> result of the calculation that Anne can obtain?

(**A**) 925   (**B**) 933   (**C**) 939   (**D**) 942   (**E**) 948