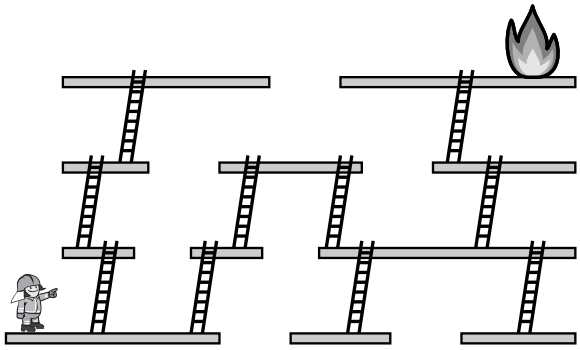
Year 3 and 4 (ENGLISH VERSION)

Saturday, 23rd March 2024 Time allowed: 45 minutes

1. For each question exactly one of the 5 options is correct.
2. Each participant is given 18 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 90, the minimum is 0.
3. Calculators and other electronic devices are not allowed.

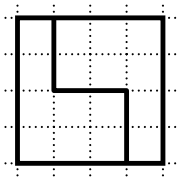
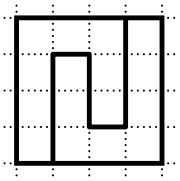
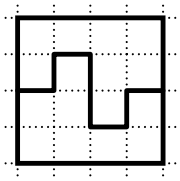
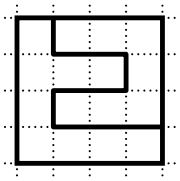
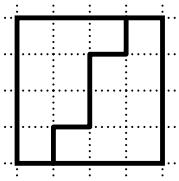
3 point problems

A1 The firefighter is in a hurry. She has to put out the fire and is looking for the quickest way to get there.
How many ladders does she have to use?

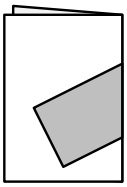


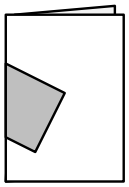
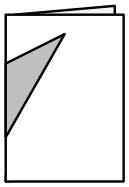
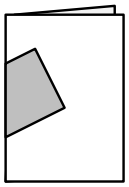
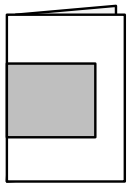
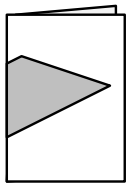
(**A**) 5 (**B**) 6 (**C**) 7 (**D**) 8 (**E**) 9

A2 Which square is cut into two <u>different</u> shapes?

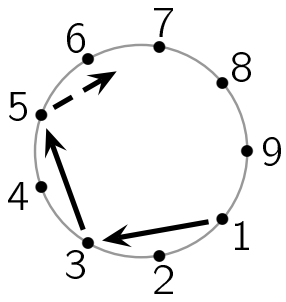
(**A**)  (**B**)  (**C**)  (**D**)  (**E**) 

A3 Berna draws a rectangle onto a piece of paper, then she folds it and sees (from the front side) the picture on the right:
What could the folded paper look like <u>from behind</u>?


front view

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

A4 In a game, 9 children stand in a circle. They throw a ball in turn, always to the child standing 2 places to the left. The child at point 1 starts. Each child throws the ball exactly once. Ali throws the ball last. At which point stands Ali?



(**A**) 8 (**B**) 7 (**C**) 6 (**D**) 4 (**E**) 2

A5 There are 7 dustbins in front of the house. They are yellow, black or blue, a different number of each colour. There are the most yellow bins.
How many yellow bins are there?

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

A6 On the blackboard, 3 consecutive 3-digit numbers were written in sequence. Mariam erased 4 digits for fun.
Which digits did Mariam erase from left to right?

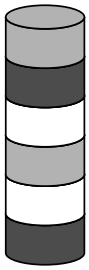
(**A**) 8 4 5 9 (**B**) 9 4 4 9 (**C**) 8 3 2 7 (**D**) 7 4 4 8 (**E**) 9 5 6 9

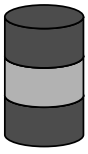
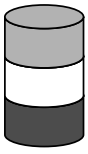
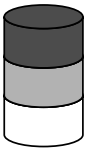
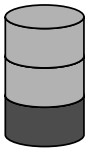
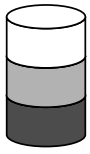
4 point problems

B1 Sami is a big kangaroo fan. He even put up a kangaroo poster this year.
How many tiles are behind the poster?

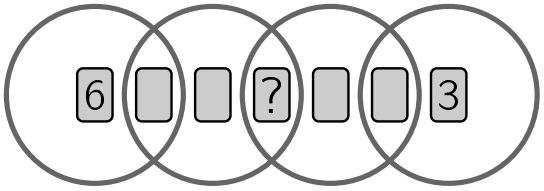
(**A**) 32 (**B**) 35 (**C**) 38 (**D**) 44 (**E**) 49

B2 Jasmin removes the 2nd disc from the bottom of the tower shown on the right. She then removes the 3rd disc from the bottom of the resulting tower. She then removes the 4th disc from the bottom of the resulting tower.
Which tower does Jasmin end up with?



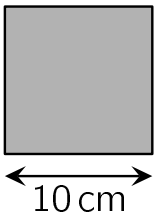
(**A**) 
(**B**) 
(**C**) 
(**D**) 
(**E**) 

B3 Seven cards, numbered 1 to 7, are placed in the overlapping rings, as shown in the picture. The sum of the numbers in each ring is 10. Which number is below the question mark?



(**A**) 1 (**B**) 2 (**C**) 4 (**D**) 5 (**E**) 7

B4 Aya divides the square shown into a square with a side length of 6 cm and small squares with side lengths of 2 cm. How many squares does Aya get?

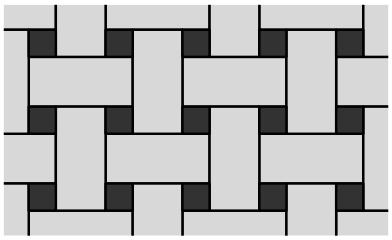


(**A**) 9 (**B**) 11 (**C**) 13 (**D**) 15 (**E**) 17

B5 Elie writes the numbers from 1 to 20 in a row without any particular order. To the left of the number 13 are exactly 5 numbers that are greater than 13. To the right of the number 13 are exactly 8 numbers that are smaller than 13. In which position from the left is the number 13?

(**A**) in 6th (**B**) in 7th (**C**) in 8th (**D**) in 9th (**E**) in 10th

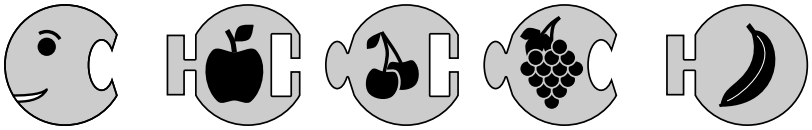
B6 The vestibule of the gymnasium was re-tiled. The tiles are grey rectangles ▭ and black squares ■. The grey rectangles are 23 cm long and 11 cm wide. What is the side length of the square tiles?



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

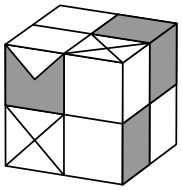
5 point problems

C1 Rida plays with a caterpillar puzzle. Rida wants to make a caterpillar that has a head, a tail and either 1 or 2 or 3 puzzle pieces in between. How many different caterpillars can Rida make?



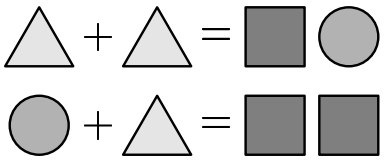
(**A**) 3 (**B**) 4 (**C**) 5 (**D**) 6 (**E**) 7

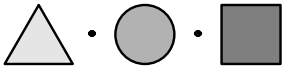
C2 The cube shown should be built with white building blocks  and grey building blocks  . The number of white blocks should be as small as possible. How many white blocks are needed?



(**A**) 18 (**B**) 17 (**C**) 16 (**D**) 15 (**E**) 14

C3 In the calculations on the right Georges replaces the same symbols with the same digits and different symbols with different digits. What is the value of the following?

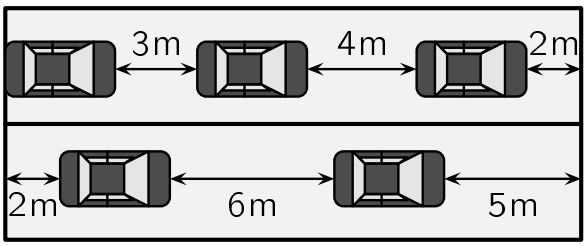




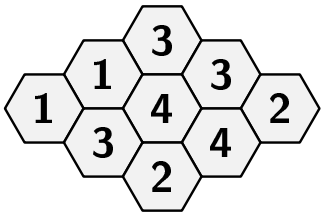
(**A**) 10 (**B**) 15 (**C**) 18 (**D**) 28 (**E**) 30

C4 There are 5 cars of the same size on a car ferry. The few cars are spaced far apart. How long is each car?

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



C5 Some cells in the beehive contain honey. The number in each cell indicates how many of its neighbouring cells contain honey. How many cells in this beehive contain honey?



(**A**) 4 (**B**) 5 (**C**) 6 (**D**) 7 (**E**) 8

C6 Carol, Ahmad and Zeina baked some cookies for the school party. They want to eat some of the cookies themselves. Those lie in a row on the table:  The children take cookies from the table exactly once in some order. One child takes all the hearts that are still on the table. One child takes all the light-coloured cookies still on the table. And one child takes all the big cookies that are still on the table. At the end, one of the children has 3 cookies, one has 6 cookies and one has 7 cookies. Which picture shows the cookies that one of the children has taken?

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