

## Year 3 and 4 (ENGLISH VERSION)

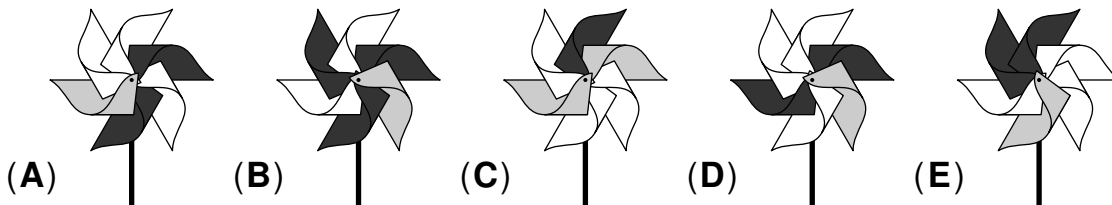
Thursday, 20th March 2025

Time allowed: 75 minutes

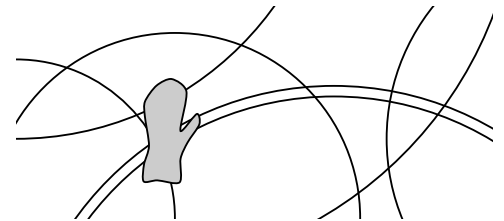
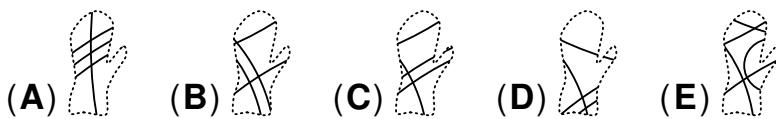
- For each question exactly one of the 5 options is correct.
- Each participant is given 24 points at the beginning. For each correct answer 3, 4 or 5 points are added. No answer means 0 points are added. If a wrong answer is given, one quarter of the points is subtracted, i.e. 0.75 points, 1 point or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

### 3 point problems

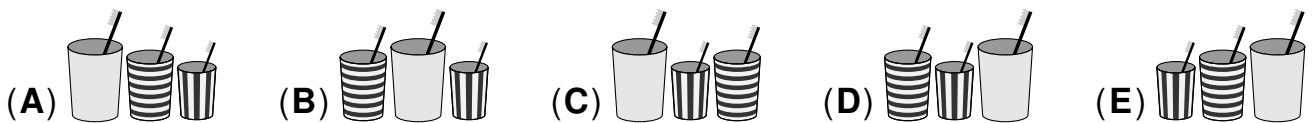
- A1** Selina spins her pinwheel, which is shown on the right. Which of the pinwheels below is hers?



- A2** Isabel drops her glove on the ice rink. What do the tracks look like under her glove?



- A3** The toothbrush cups start in the order shown on the right. Max swaps around the biggest and the smallest cups. Then he swaps around the striped cups. What order are the cups in now?



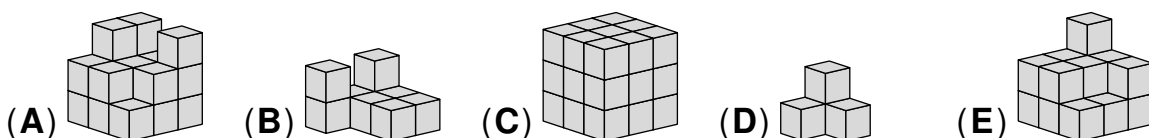
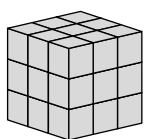
- A4** Simona has the numbers 2, 0, 2 and 5. She writes one number in each box.

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Which order makes her calculation have the largest result?

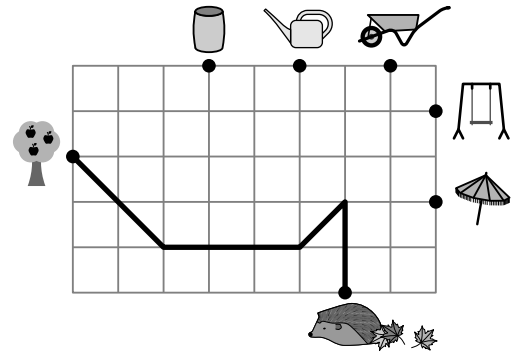
- (A) 0, 2, 2, 5    (B) 0, 5, 2, 2    (C) 2, 5, 2, 0    (D) 5, 0, 2, 2    (E) 5, 2, 0, 2

- A5** Lukas joins small cubes one at a time to build the cube shown on the right. His sister takes 5 photographs during the build. What does the fourth photograph look like?



- A6** Ingmar the hedgehog walks from the pile of leaves to the apple tree as follows:  $2\uparrow$   $1\swarrow$   $3\leftarrow$   $2\searrow$  (see picture). Then he walks from the tree as follows:  $2\rightarrow$   $1\searrow$   $2\swarrow$   $1\uparrow$ . Where does he end up?

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



- A7** Which rope ties into a knot when the ends are pulled?

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

- A8** Ben throws 5 normal dice and gets a total of 18 dots. One dice shows one dot and another shows two dots. The other three dice show the same number of dots. How many dots does each of these dice show?

(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

#### 4 point problems

- B1** Three rods are shown on the right. Which pinwheel can be built by laying the three rods on top of each other?

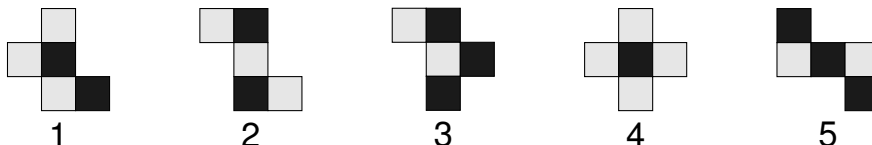


(A) (B) (C) (D) (E)

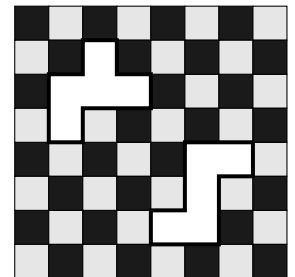
- B2** Alina and Samuel pay with snail shells and stones in their playshop. One snail shell has a value of 6 and one stone has a value of 1. How could Samuel make a total value of 16?

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

- B3** Which two pieces shown below complete the chessboard?



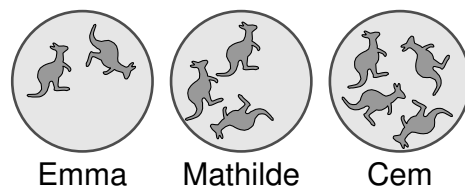
(A) 1 and 2 (B) 1 and 5 (C) 3 and 4 (D) 3 and 5 (E) 4 and 5



- B4** These 5 cards lay in front of me: I take two cards away and push the rest together without changing the order. What could the remaining 3 cards look like?

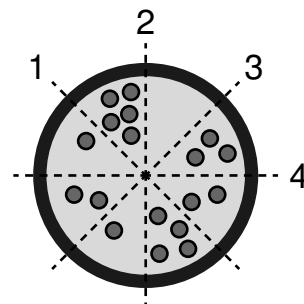
(A) (B) (C) (D) (E)

- B5** Emma, Mathilde and Cem each have some kangaroo cookies on their plates. They then share 12 more cookies so they all have the same number on each plate. How many more cookies does Emma get?



(A) 5      (B) 6      (C) 8      (D) 9      (E) 10

- B6** Julian shares a pizza with his brother and cuts along one of the lines shown. He wants the same number of tomatoes on each half. Along which two lines could he cut?



(A) 1 or 4      (B) 1 or 3      (C) 2 or 4      (D) 2 or 3      (E) 3 or 4

- B7** Annabella feeds six sheep. She has exactly 210 grams of food. Annabella gives the smallest sheep twice as much to eat as each of the others. How much food does the smallest sheep get?



(A) 50 grams      (B) 60 grams      (C) 65 grams      (D) 75 grams      (E) 80 grams

- B8** In Mrs Dorn's garden, there are 2 white, 2 yellow and 2 red roses. Mrs Dorn cuts 3 roses to make a small bunch of flowers. How many different bunches are possible?

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

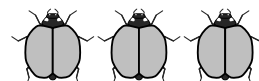
### 5 point problems

- C1** Some children decorate pairs of ladybirds by sticking spots on them. Each pair of ladybirds has the same number of spots.

9 ladybirds are complete:

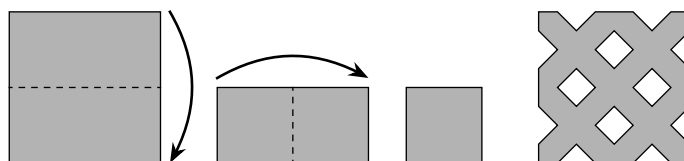


How many spots in total are needed for the last three ladybirds?



(A) 8      (B) 9      (C) 10      (D) 11      (E) 12

- C2** Milo folds a paper square in half and then in half again. Next he cuts pieces out of his folded paper. He then unfolds to get the paper snowflake shown.



How did Milo cut his folded paper?

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

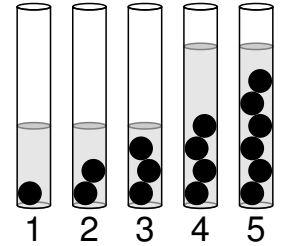
- C3** Put each of the numbers 1, 2, 3, 4, 5 and 7 into the circles to make the calculations correct. The number 6 is already written. Which number belongs in the circle with the star ★ ?

(A) 2      (B) 3      (C) 4      (D) 5      (E) 7

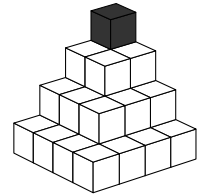
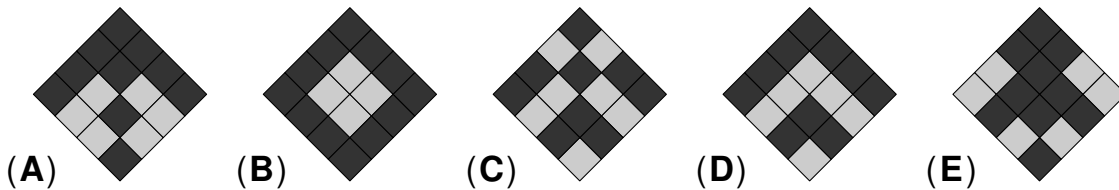
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- C4** Some identical marbles are put into five tubes. Then, water is added so that tubes 1, 2 and 3 have the same water level. In tubes 4 and 5 the water level is twice as high. Which tube had the least amount of water added?

(A) 1      (B) 2      (C) 3      (D) 4      (E) 5




- C5** The pyramid is built from black and grey cubes. Cubes touching along a side must be different colours. There is a black cube at the top. What does the finished pyramid look like from above?

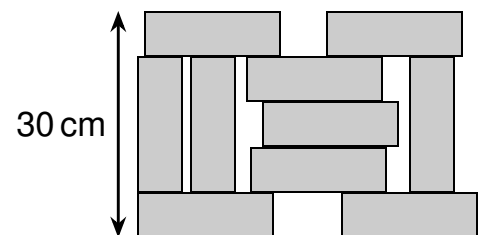


- C6** Larissa has 50 buttons. Each button is either white, red or blue. Larissa has 11 times as many white buttons as blue buttons. There are more red buttons than blue but fewer red buttons than white. How many red buttons are there?

(A) 2      (B) 8      (C) 14      (D) 18      (E) 26

- C7** Ten identical bricks  are stacked as shown. This is the view from the front. How long is the longest edge of each brick?

(A) 18 cm   (B) 19 cm   (C) 20 cm   (D) 21 cm   (E) 22 cm



- C8** A guard sits at the entrance to a magical cave. In front of him are two beam balances with shiny objects on them: balls, cubes and stars. "To enter the cave, you must find the mass of one cube," the guard said. "Each object has a mass of either 1 kg, 2 kg, 3 kg, 4 kg or 5 kg. Objects that look the same have the same mass."

How much does a cube weigh?

(A) 1 kg   (B) 2 kg   (C) 3 kg   (D) 4 kg   (E) 5 kg

