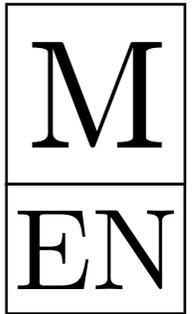


KANGAROO 2020



Minor
3–4 grades

Time allowed: 75 minutes
Calculators are not permitted

Questions for 3 points

18. 6 people each order one scoop of ice cream. They order 3 scoops of vanilla, 2 scoops of chocolate and 1 scoop of lemon. Three of them top the ice cream with a cherry, 2 – with a wafer and 1 – with a chocolate chip. They use one topping on each scoop, such that no two ice creams are alike. Which of the following combinations is **not** possible?

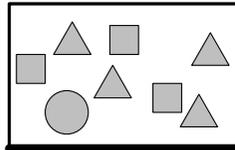


- A) Chocolate with a cherry B) Vanilla with cherry C) Lemon with a wafer
D) Chocolate with a wafer E) Vanilla with a chocolate chip

19. The Queen tries to find out the three names of Rumpelstiltskin's wife. She asks her: "Are you called Adele Lilly Cleo? Are you called Adele Laura Cora? Are you called Abbey Laura Cleo?" Each time exactly one name and its position was right. What is the name of Rumpelstiltskin's wife?

- A) Abbey Lilly Cora B) Abbey Laura Cora C) Adele Laura Cleo
D) Adele Lilly Cora E) Abbey Laura Cleo

20. The teacher writes the numbers from 1 to 8 on the board. The teacher then covers the numbers with triangles, squares and a circle. If you add the four numbers covered by the triangles, the sum is 10. If you add the three numbers covered by the squares, the sum is 20. Which number is covered by the circle?



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

21. Six different numbers chosen from 1 to 9 are written on the faces of a cube, one number on each face. The sums of numbers on each pair of opposite faces are equal. Which number could be on the face opposite to the face with the number 5?

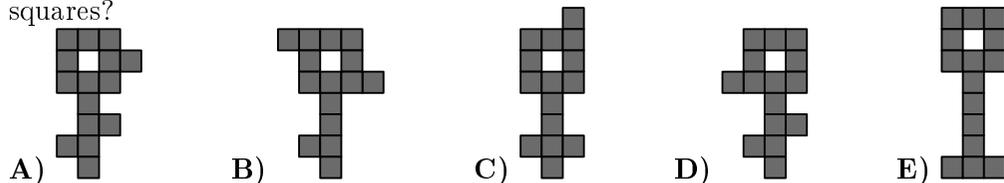


- A) 3 B) 5 C) 6 D) 7 E) 9

22. Several teams came to the summer Kangaroo camp. Each team has 5 or 6 members. There are 43 people in total. How many teams are at this camp?

- A) 4 B) 6 C) 7 D) 8 E) 9

23. Which key would it be impossible to cut into three different figures of five shaded squares?



- A) B) C) D) E)

24. Ann replaces letters in the calculation $KAN - ROO + GA$ with numbers from 1 to 9 and then calculates the result. The same letters are replaced by the same numbers and different letters by different numbers. What is the largest possible result she could get?

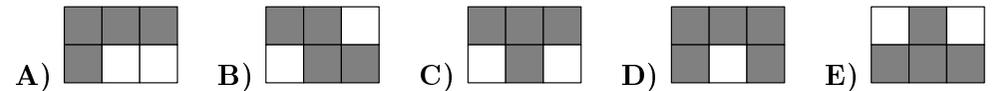
- A) 925 B) 933 C) 939 D) 942 E) 948

1. How much is $1 + 2 + 3 + 4 + 5 + 4 + 3 + 2 + 1$?

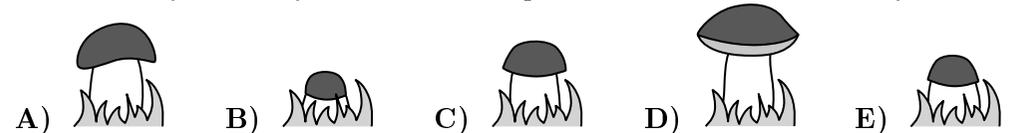
- A) 20 B) 22 C) 24 D) 25 E) 31

$16 + 4$	$19 + 1$	$28 - 8$
$2 \cdot 10$	$16 - 4$	$7 \cdot 3$

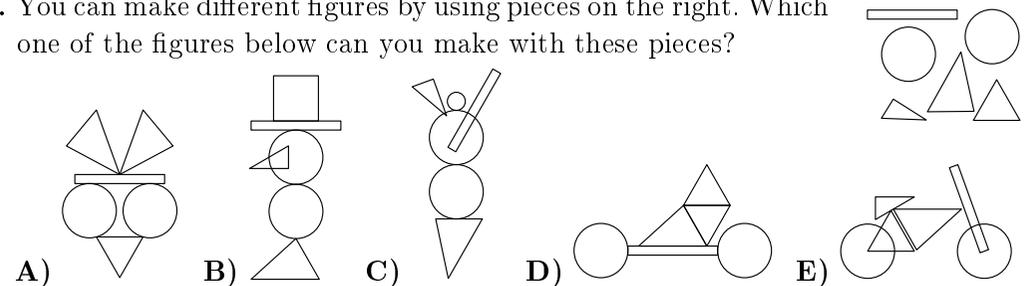
2. Tysger shades all the squares in the grid where the result is 20. Which shape does he get?



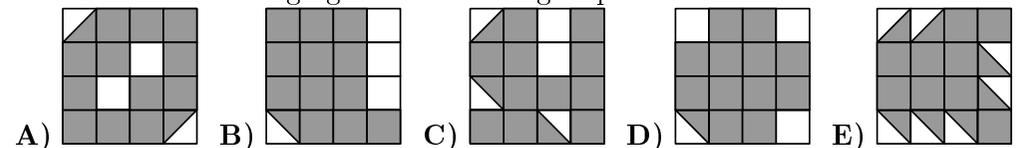
3. A mushroom grows every day. Mary takes a picture of the mushroom each day from Monday to Friday. Which of these pictures was taken on Tuesday?



4. You can make different figures by using pieces on the right. Which one of the figures below can you make with these pieces?



5. Which of the following figures has the largest part shaded?



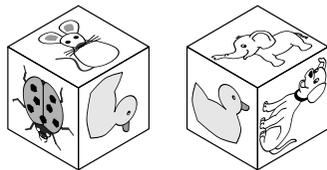
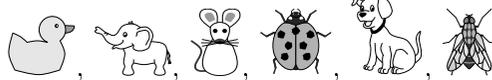
- A) B) C) D) E)

6. Elli draws the big square with chalk on the pavement. She starts jumping from number 1. Each time she jumps, she always jumps to a number that is 3 more than the number she is standing on. What is the largest number Elli can jump onto?

1	5	8	11
4	7	10	14
24	23	13	18
21	19	16	20

- A) 11 B) 14 C) 18 D) 19 E) 24

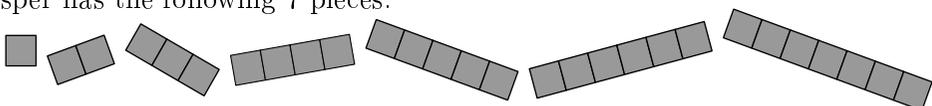
7. Jorge glues these 6 stickers to the faces of a cube:



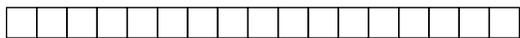
The pictures shows the cube in two positions. Which sticker is on the opposite face to the duck?

- A) elephant B) rabbit C) ladybug D) dog E) bee

8. Casper has the following 7 pieces:



He uses some of these pieces to fully cover this grid without overlap:

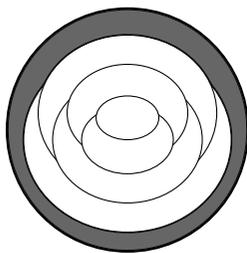


He uses as many different pieces as possible. How many pieces does Casper use?

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

Questions for 4 points

9. Cindy colours each region of the pattern below either red, grey or yellow so that adjacent regions have different colours. She has already coloured the outer region grey. How many regions of the completed pattern are coloured grey?

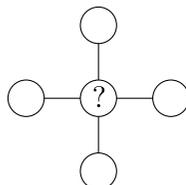


- A) 1 B) 2 C) 3 D) 4 E) 5

10. John and Olivia exchanged sweets. First John gave Olivia as many sweets as Olivia had. Then Olivia gave John as many sweets as John had after the first exchange. After these two exchanges, each had 4 sweets. How many sweets did John have at the beginning?

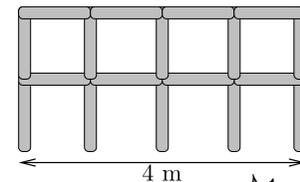
- A) 6 B) 5 C) 4 D) 3 E) 2

11. Roo wrote each of the numbers 1, 2, 3, 4 and 5 in one of the circles so that the sum of the numbers in the row is equal to the sum of the numbers in the column. What number could be written in the circle with the question mark?



- A) Only 5 B) 2, 3 or 4 C) Only 3 D) Only 1 or 3 E) 1, 3 or 5

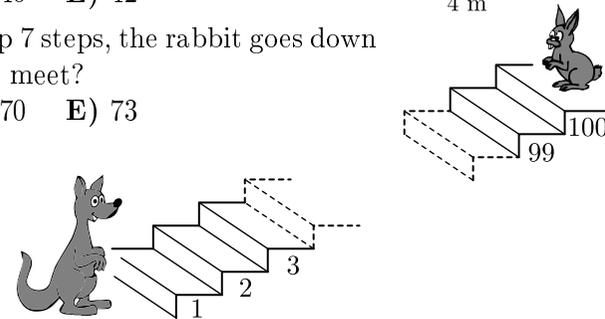
12. Lonneke builds a fence using 1 metre long poles. The picture shows a 4 metres long fence. How many poles does Lonneke need to build a 10 metres long fence?



- A) 22 B) 30 C) 33 D) 40 E) 42

13. Every time the kangaroo goes up 7 steps, the rabbit goes down 3 steps. On which step do they meet?

- A) 53 B) 60 C) 63 D) 70 E) 73



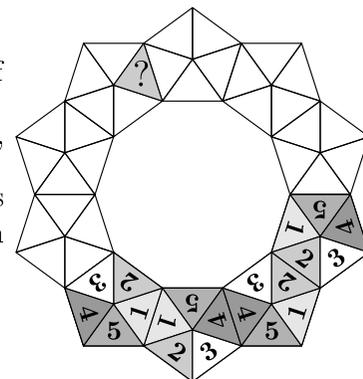
14. The sum of three numbers is 50. Karin subtracts a secret number from each of these three numbers. She gets 24, 13 and 7 as the results. Which one of the following is one of the original three numbers?

- A) 9 B) 11 C) 13 D) 17 E) 23

15. Amelie wants to build a crown using 10 copies of this token



When two tokens share a side, the corresponding numbers match. Four tokens have already been placed. Which number goes in the triangle marked with a question mark?



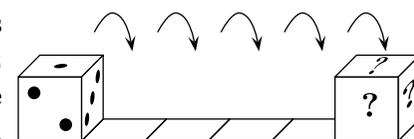
- A) 1 B) 2 C) 3 D) 4 E) 5

16. Farid has two types of sticks: short ones, measuring 1 cm and long ones, measuring 3 cm. With which of the combinations below can he make a square, without breaking or overlapping the sticks?

- A) 5 short and 2 long B) 3 short and 3 long C) 6 short D) 4 short and 2 long E) 6 long

Questions for 5 points

17. A standard dice has 7 as the sum of the dots on opposite faces. The dice is put on the first square as shown and then rolls towards the right. When the dice gets to the last square, what is the total number of dots on the three faces marked with the question marks?



- A) 6 B) 7 C) 9 D) 11 E) 12