

# KÄNGURU DER MATHEMATIK 2025

## 20<sup>th</sup> March 2025

### Level: Benjamin, Grade: Schulstufe 5 - 6

Full name:	
School:	
Class:	

**Time: 60 min.**

each correct answer to questions 1 – 8: 3 points  
 each correct answer to questions 9 – 16: 4 points  
 each correct answer to questions 17 – 24: 5 points  
 each questions left unanswered: 0 points  
 each incorrect answer: minus  $\frac{1}{4}$  of the points for the question  
24 base points



**Please write the letter (A, B, C, D, E) of your answer in the square under the question number (1 bis 24). Write clearly and carefully!**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>

<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>



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Information über den Känguruwettbewerb: [www.kaenguru.at](http://www.kaenguru.at)  
 Wenn du mehr in dieser Richtung machen möchtest,  
 gibt es die Österreichische Mathematikolympiade.  
 Infos unter: [www.oemo.at](http://www.oemo.at)



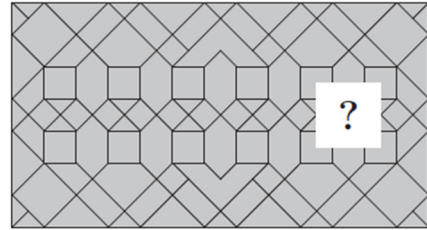
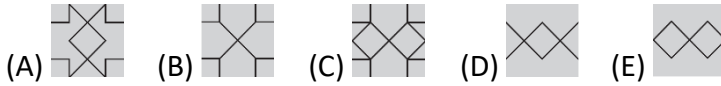
# Känguru der Mathematik 2025


## Level Benjamin (Schulstufe 5 and 6)

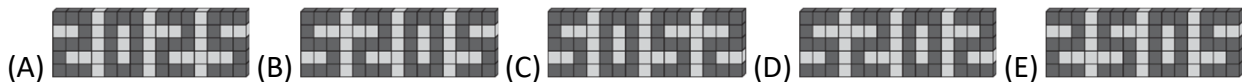
### Austria – 20<sup>th</sup> March 2025

3 Points

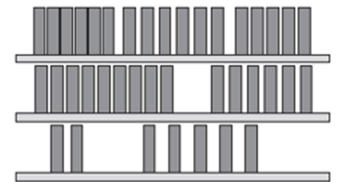
1. Which of the pieces shown completes the pattern?



2.  Anna builds a wall out of black and grey bricks that shows 2025. What can Bella read on the back of the wall?



3. A bookshelf with three rows has 17 books in the top row, 15 books in the middle row and 7 books in the bottom row. Monika would like to have the same number of books in each row, but she wants to rearrange as few books as possible.



How many books does she have to move from the middle row to the bottom row?

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

4. Grey squares of equal size are glued onto a cube (see picture).

All surfaces of the cube then look the same.

How many grey squares were used in total?

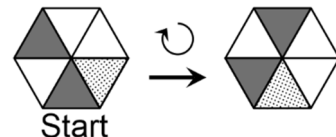
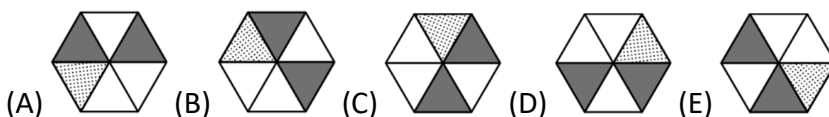
- (A) 14 (B) 15 (C) 16 (D) 18 (E) 30



5. Thea rotates a painted hexagon clockwise one space at a time.

The first rotation can be seen in the picture.

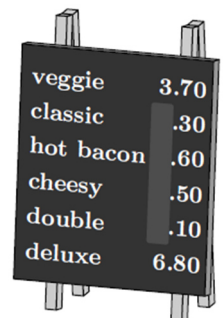
Which hexagon does Thea see after the eighth rotation?



6. The picture on the right shows the menu of a burger restaurant. The rain has washed away some of the numbers. The burgers are ordered by price.

Which of the following prices was on the board?

- (A) 4.10 (B) 5.50 (C) 5.60 (D) 6.30 (E) 6.60



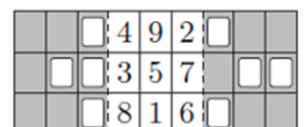
7. Six children were running a race. Ariadne finished third.

Bill finished sixth, just behind Ernest. Fatima finished between Ariadne and Ernest.

Diana overtook Charles just before the finish line. Who won the race?

- (A) Ariadne (B) Charles (C) Diana (D) Ernest (E) Fatima

8. There are numbers on the middle part of a 3-part unfolded card. The left and right parts of the card have holes. Mike folds the right part along the dotted line onto the middle part. He can now see the numbers 2, 3, 5 and 6 through the holes. Then he folds the left part along the dotted line onto the other two parts.



What is the sum of the numbers that he can still see through the holes?

- (A) 8 (B) 9 (C) 10 (D) 12 (E) 14

# 4 Points

9. Three turtles are competing in a 10 km race. Each of them moves at a constant speed. When the first turtle finishes the competition, the second has completed  $\frac{1}{4}$  of the distance and the third has completed  $\frac{1}{5}$  of the distance. How far is the third turtle from the finish line when the second turtle finishes the race?

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

10. Vera has built a tower of cubes. She wants to replace the two cubes with question marks with cubes with numbers. Vera wants the number on each cube to be at least 2 higher than the number on the cube below it.

How many ways can she replace the two cubes?

(A) 3 (B) 4 (C) 5 (D) 6

(E) 7

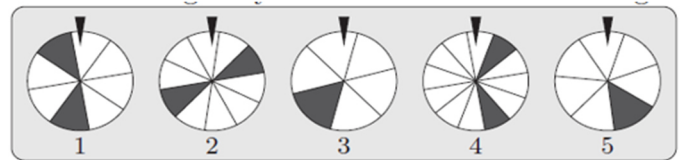


11. In the picture you can see five different wheels of fortune. Each wheel of fortune is divided into equal-sized parts, but the number of parts are different.

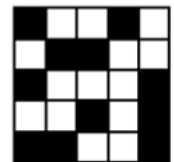
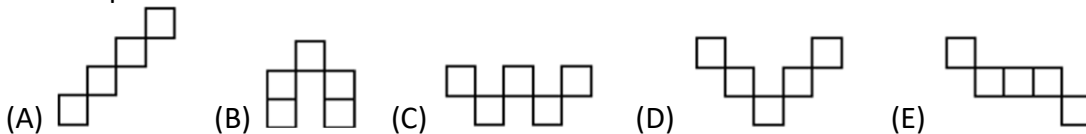
Anna spins all of the wheels of fortune. If a wheel of fortune stops at the arrow with a dark sector, she wins.

Which of the wheels of fortune gives Anna the best chance of winning?

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



12. Which of the five shapes cannot be placed on the large square so that it only lies on white squares?



13. Five swimmers from a school are training for a relay race. The five participants swim the same distance, one after the other, without stopping. The coach stops the intermediate time after each swimmer. The first swimmer takes 2 minutes and 8 seconds. The stopwatch shows the total time after the first, second, third, fourth and fifth swimmer.

Which swimmer swam the distance the fastest?

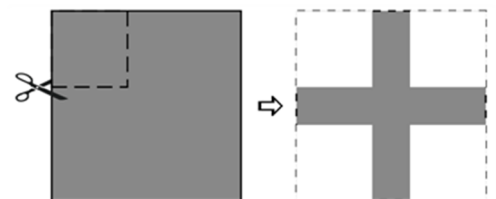


(A) the first (B) the second (C) the third (D) the fourth (E) the fifth

14. Jana cuts four small squares of the same size from the corners of a square piece of paper (see picture). The total cut-away area is  $16 \text{ cm}^2$ , the area of the remaining figure (cross) is  $9 \text{ cm}^2$ .

What is the perimeter of the cross?

(A) 9 cm (B) 16 cm (C) 20 cm (D) 25 cm (E) 32 cm



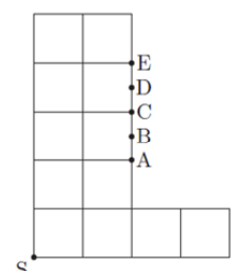
15. Each card has two 3-digit numbers on it. Some of the digits are hidden. On one of the cards, the sum of the digits of the two numbers is the same. Which one?

(A) 543 and 11 (B) 58 and 11 (C) 982 and 1 (D) 211 and 6 (E) 777 and 2

16. The diagram shown on the right consists of squares of equal size. Point B is in the middle of A and C, point D in the middle of C and E. Maria wants to divide the figure into two parts with equal areas using a straight line.

Which of the points A, B, C, D or E must she connect to S to obtain this result?

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



17. Hassan writes either the number 0 or the number 1 in each field of the table.

The sum in each row, column and diagonal should be exactly 3. Hassan has entered 0 in one field and then fills out the table completely.

What is the sum of the numbers in the fields with question marks?

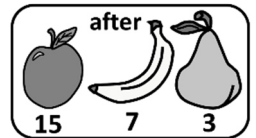
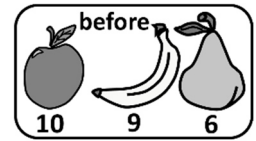
- (A) 1 (B) 2 (C) 3 (D) 4 (E) cannot be determined

	?		
		0	
?			?
	?		

18. A witch has 10 apples, 9 bananas and 6 pears. One day she enchants all of her fruits into different types of fruit. For example, she turns each apple into either a banana or a pear. After that she has 15 apples, 7 bananas and 3 pears.

How many apples did she turn into bananas?

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



19. The square shown on the right has sides of 10 cm. The square is divided into two equal-sized rectangles by the vertical centre line.

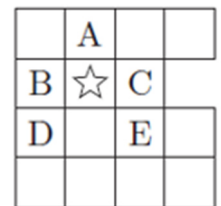
What is the area of the grey section?

- (A) 12.5 cm<sup>2</sup> (B) 25 cm<sup>2</sup> (C) 30 cm<sup>2</sup> (D) 40 cm<sup>2</sup> (E) 50 cm<sup>2</sup>



20. Joanna divides the figure into five equal-sized, same-shaped parts, each of which consists of three squares. Which of the letters is in the part with the star?

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



21. Fabio never tells the truth on Tuesdays, Thursdays and Saturdays, while he always tells the truth on the other days of the week.

One day Mateo had the following conversation with Fabio:

Mateo: "What day is today?"

Fabio: "Saturday"

Mateo: "What day will tomorrow be?"

Fabio: "Wednesday"

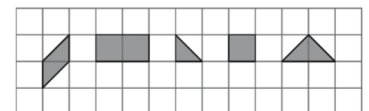
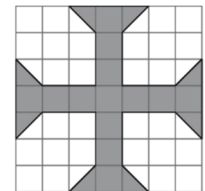
On which day of the week did the conversation take place?

- (A) Monday (B) Tuesday (C) Wednesday (D) Thursday (E) Friday

22. Julio wants to make the shape shown in the top picture on the right. He has several of each of the five tiles shown in the bottom picture on the right. The tiles must be placed next to each other without overlapping.

What is the smallest number of tiles he must use?

- (A) 11 (B) 12 (C) 13 (D) 15 (E) 17



23. Tina wants to combine the three building blocks shown in the picture to form a cube building.

Which one of the following cube buildings could she make?



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

24. Zita would like to buy some flowers. She can choose between flowers for 3€, 4€ and 5€.

How many different bouquets can she buy for exactly 23€?

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

