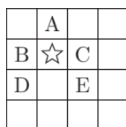


23. Joanna divides the figure shown into five equally shaped parts, each consisting of three squares. The square containing which letter is in the same part as the square marked with a star?

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

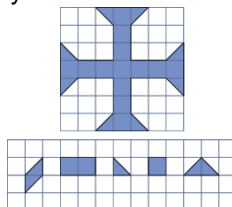


24. Facu never tells the truth on Tuesdays, Thursdays and Saturdays. He always tells the truth on the other four days. One day Mateo had the conversation with Facu. Mateo: "What day is today?" Facu: "Saturday". Mateo: "What day will be tomorrow?" Facu: "Wednesday". On which day did this conversation take place?

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

25. Julio wants to construct this cross shape shown in the picture using pieces shaped like the ones below the cross. He has many copies of each piece and knows he can rotate them if needed. The pieces must not overlap. What is the smallest number of pieces he could use to construct the shape?

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

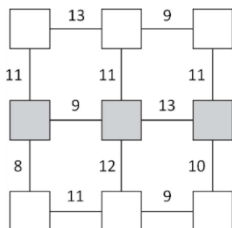


26. Some blocks are balanced on top of each other, as shown. Blocks that are shaded in the same way have the same weight. Ville wants to order the three different types of square block from heaviest to lightest. What order should Ville obtain?

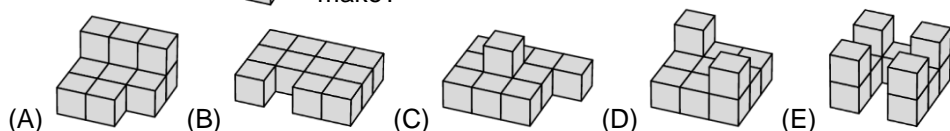
(A) [shaded block] [dotted block] [cross block] (B) [shaded block] [cross block] [dotted block] (C) [dotted block] [cross block] [shaded block] (D) [dotted block] [shaded block] [cross block] (E) [cross block] [dotted block] [shaded block]

27. Patricia wants to write the numbers from 1 to 9 into the squares in the diagram, with one number in each square. She wants the sum of the numbers in any two adjacent squares to be equal to the number shown on the line joining these squares. What is the sum of the numbers she writes in the shaded row?

(A) 16 (B) 17 (C) 18 (D) 20 (E) 21



28. Tino combines the three building blocks shown on the right. Which of the following constructions could he make?



29. Helen had three times as many chocolates as George. Helen then gave a quarter of her chocolates to George. Helen now has six more chocolates than George. How many more chocolates than George did Helen have originally?

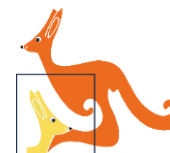
(A) 36 (B) 30 (C) 27 (D) 24 (E) 20

30. Zeta wants to buy some flowers. The prices of the three flowers she can buy are shown in the picture. How many different bouquets with a total cost of exactly 23 can she buy?

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



Starptautiskā konkursa
„Kengurs” uzdevumi

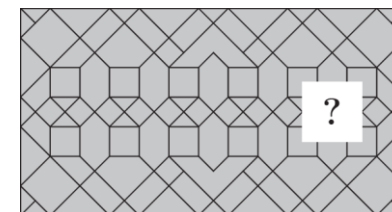


20.03.2025.

5.-6. klase

3 point problems

1. Which of the pieces shown would complete the pattern?

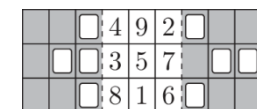


2. Anna has built a construction that displays the year 2025. Bella stands on the other side of the construction. What does Bella see?



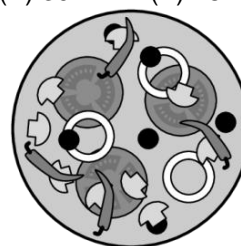
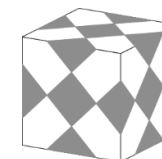
3. Mike has a leaflet with numbers and holes in the flaps on both sides, as shown in the picture. He folds the right flap along the dotted line and sees the numbers 2, 3, 5 and 6 through the holes. Then he folds the left flap along the other dotted line. What is the sum of the numbers he sees now?

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



4. A cube is decorated by gluing identical grey squares on it. All faces of the cube look the same. How many grey squares are there in total?

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

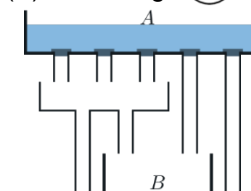


5. Emil put slices of tomato, black olives, chillis, mushrooms and onion rings on top of a pizza, but not necessarily in that order. He only put one ingredient at a time. His finished pizza is shown in the picture. Which was the third topping he put on the pizza?

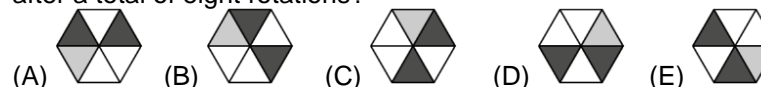
(A) tomato slices (B) black olives (C) chillis (D) mushrooms (E) onion rings

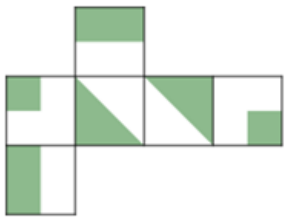
6. Container A holds 10 litres of water. All five plugs at the bottom of container A are taken out at the same time and the water flows out. What volume of water flows into container B?

(A) 3 litres (B) 4 litres (C) 5 litres (D) 6 litres (E) 8 litres



7. Thea rotates a piece of paper divided into six equal parts. When the paper is rotated, it is turned clockwise one part. The original sheet of paper and the result of one rotation are shown in the diagram. What does the sheet of paper look like after a total of eight rotations?





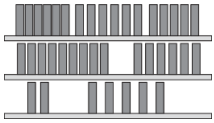
3. Natalia has a net of cubes as shown. Which cube is impossible for Natalia to make?



9. Six children took part in a race. Ariadne finished in the third place. Biel finished sixth, just behind Ernest. Fatima finished between Ariadne and Ernest. Diana overtook Charles right before the finish line. Who won the race?

finished between Ariadne and Ernest. Diana overtook Charles right before the finish line. Who won the race?

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



10. A bookshelf with three shelves has 17 books on the top shelf, 15 books on the middle shelf, and 7 books on the bottom shelf. Monika wants all shelves to have the same number of books on. She also wants to move as few books as possible.

How many books should she move from the middle shelf to the bottom shelf?

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

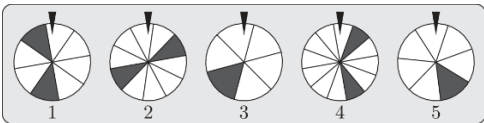
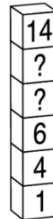
4 point problems

11. Three turtles participate in a 10-kilometre race. Each of them moves at a constant speed. When the first turtle finishes, the second turtle has covered $\frac{1}{4}$ of the distance, and the third turtle has covered $\frac{1}{5}$ of the distance. How far from the finish line will the third turtle be when the second turtle finishes?

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

12. Vera has built a tower of blocks. She wants to replace the two blocks with the question marks on with two blocks with numbers on. She wants the number on each block in her tower to be at least 2 more than the number on the block below it. In how many ways can Vera do this?

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

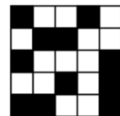
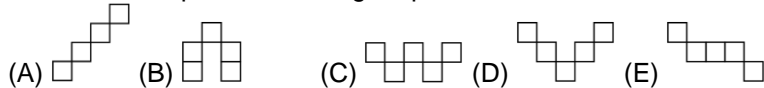


13. The picture shows five wheels of fortune. Each wheel is divided into equal parts, the number of which differs from the other wheels. You will win a

prize when the wheel is spun and then stops with the triangle above the wheel pointing to a part that is shaded. Which wheel gives you the best chance of winning?

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

14. Which shape, or any rotation of the shape, cannot be placed onto the white parts of the large square?



15. My school's swimming team is practising for a relay competition. Five swimmers swam the same distance, one after the other. The pictures below show



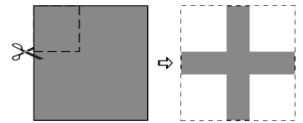
the times on their coach's stopwatch when each swimmer had finished their leg. The first swimmer needed 2 minutes and 8 seconds. Which one of the swimmers needed the least time?

the times on their coach's stopwatch when each swimmer had finished their leg. The first swimmer needed 2 minutes and 8 seconds. Which one of the swimmers needed the least time?

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

16. Jana cuts four identical squares from the corners of a square sheet of paper, as shown. The total area she cut off is 16 cm^2 and the area of the cross that remains is 9 cm^2 . What is the perimeter of the cross in cm ?

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

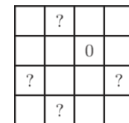
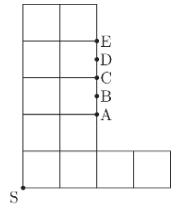


17. Each of the cards shown below have two 3-digit numbers written on them, but some of the digits cannot be seen as they are covered in ink. On one of the cards, the sum of the digits of both numbers is the same. On which card are those two numbers?

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

18. The shape in the diagram is made of identical squares. Point B is halfway between points A and C. Also, point D is halfway between points C and E. Maria wants to divide the shape into two parts of equal area. Which of the points A, B, C, D or E should she connect with a straight line to point S to do this?

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



19. Sam wants to write a 0 or a 1 in each cell of the diagram so that the sum of the numbers in each row, column and diagonal is 3. He has already written a 0 in one of the cells. When he finishes, what will the sum of the numbers in the cells shown with a question mark be?

(A) 1 (B) 2 (C) 3 (D) 4 (E) it cannot be calculated

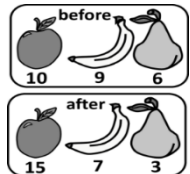
20. Mary and Paul came up with three three-digit numbers each using the digits 1 to 9 exactly once. Then they wrote down their numbers in ascending order, the smallest number was first, the largest number was third. Mary's second number turned out to be the largest of all possible numbers that could be second. Paul's second number turned out to be the smallest of all possible numbers that could be second. What is the difference between these two numbers?

(A) 642 (B) 684 (C) 864 (D) 888 (E) none of the previous

5 point problems

21. A witch had 10 apples, 9 bananas and 6 pears. One day she performed some magic and turned each of her pieces of fruit into one of the other two types. For example, she changed each apple into either a banana or a pear. She now has 15 apples, 7 bananas and 3 pears. How many of the apples did she change into a banana?

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



22. The side-length of the square shown in the diagram is 10 cm . The line down in the middle of the square divides it into two equal rectangles. What is the area of the shaded region?

(A) 12.5 cm^2 (B) 25 cm^2 (C) 30 cm^2 (D) 40 cm^2 (E) 50 cm^2

