

3 point problems

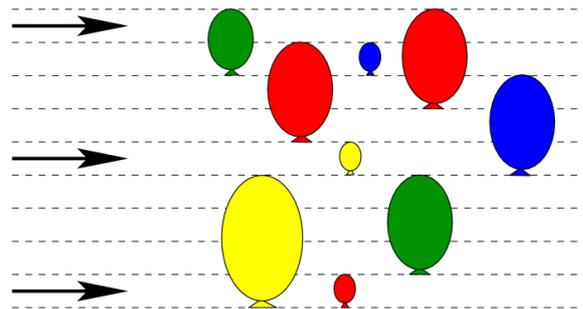
1. Leo has 10 rubber stamps. Each stamp has one of the digits: 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. Using the stamps, he prints the date of the Kangaroo contest:



How many stamps did he use?

- (A) 5 (B) 6 (C) 7 (D) 9 (E) 10

2. The picture shows 3 flying arrows and 9 fixed balloons. When an arrow hits a balloon, it bursts, and the arrow flies further in the same direction. How many balloons will burst?

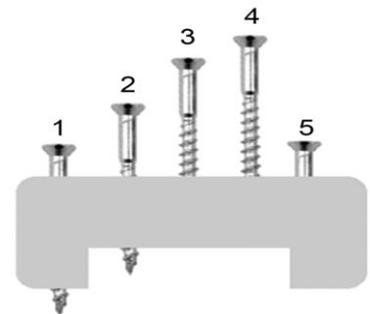


- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6

3. Susan is 6 years old. Her sister is one year younger and her brother is one year older. What is the sum of the ages of the three siblings?

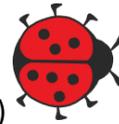
- (A) 10 (B) 15 (C) 18 (D) 21 (E) 30

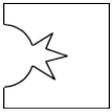
4. The picture shows five screws in a wood block. Four screws are the same length. One screw is shorter. Which screw is the shortest?

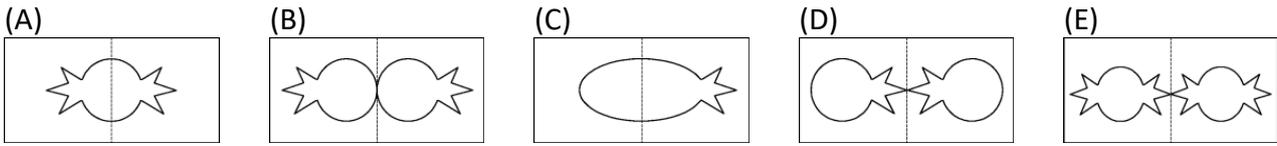


- (A) 1 (B) 2 (C) 3 (D) 4 (E) 5

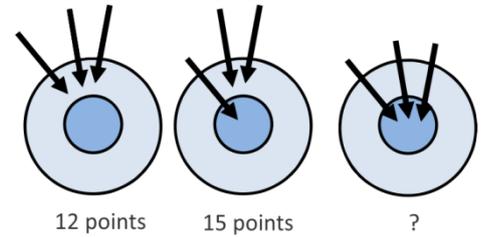
5. Here is a picture of Sophie the ladybird: . Which picture below is not Sophie?

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

6. Lucy folds a sheet of paper in half. Then she cuts a piece out of it and gets this: . What will she see when she unfolds the paper?

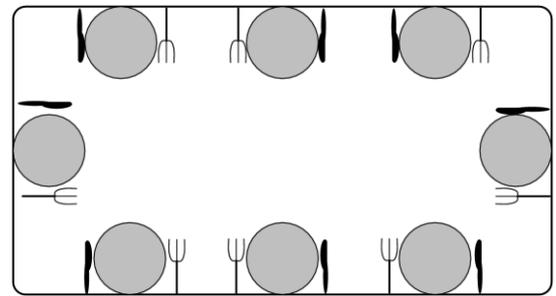


7. Diana threw three arrows at a target and scored 12 points. On her second turn she threw three arrows and scored 15 points. How many points did she score on her third turn?



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

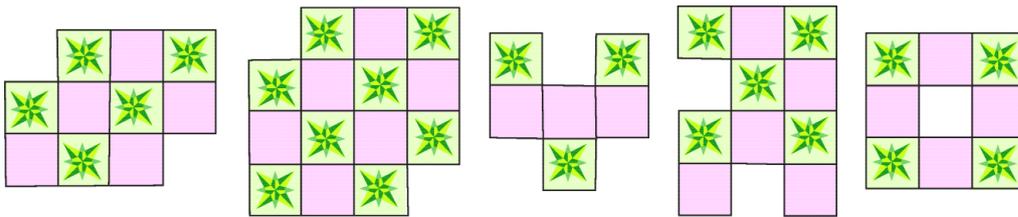
8. Mike sets the table for 8 people. He should put the cutlery next to each plate, the fork on the left and the knife on the right. For how many people did he set the table correctly?



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

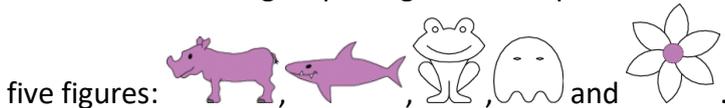
4 point problems

9. Roberto makes designs using tiles like this: . How many of the 5 designs below can he make using these tiles?



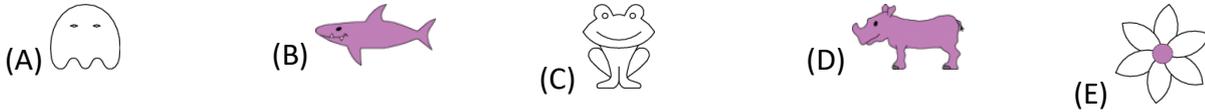
- (A) 1 (B) 2 (C) 3 (D) 4 (E) 5

10. Albert fills the grid placing in each square one of the

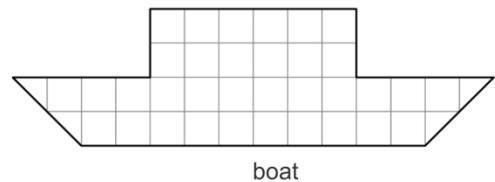
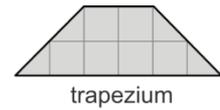


five figures: Each figure appears exactly once in every column and in every row. Which figure must Albert put in the square with the question mark?

			?	

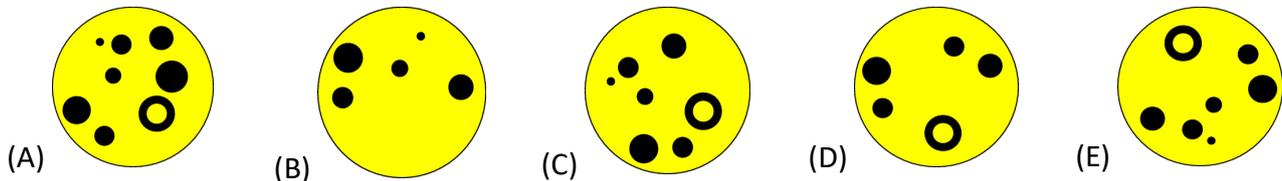
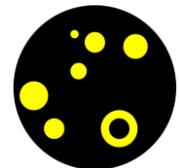


11. Tanya cuts out of a grid paper squares and trapeziums, like those in the figures. With these pieces, she wants to cover the boat. What is the smallest number of pieces that she will need?



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

12. The colors in this picture must be swapped over and the picture has to be turned around. What does the new picture look like?

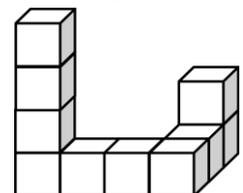


13. Peta rabbit has 20 carrots and she eats 2 carrots per day. She ate the 12th carrot on Wednesday. On what day did she start eating the carrots?



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

14. Tina glues 10 cubes together to build the structure shown. She paints the whole structure, even the bottom. How many cubes had exactly 4 faces painted?

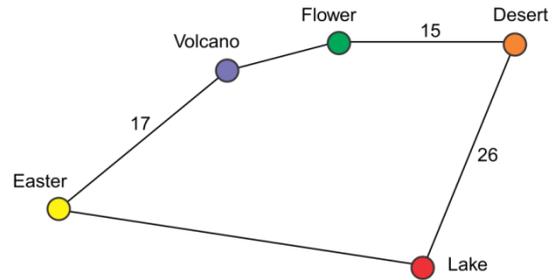


- (A) 6 (B) 7 (C) 8 (D) 9 (E) 10

15. There are eight flowers on a rose bush. Some butterflies and some bees sat on the flowers. There is no more than one insect per flower. More than half of the flowers are occupied by insects. The number of butterflies on the flowers is twice the number of bees on the flowers. How many butterflies sat on the flowers?

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

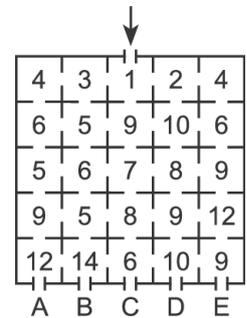
16. Captain Kook plans to sail through all the islands indicated on the map, departing from Easter and ending the trip on the same island. The total journey is 100 kilometers (km) long. The distance between Desert and Lake is the same as the distance between Easter and Flower via Volcano. How far is it directly from Easter to Lake?



- (A) 17 km (B) 23 km (C) 26 km (D) 33 km (E) 35 km

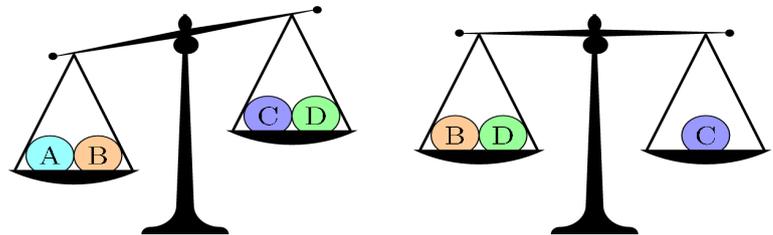
5 point problems

17. The rooms in Kanga's house are numbered. Baby Roo enters the main door, passes through some rooms and leaves the house. The numbers of the rooms that he visits are always increasing. Through which door does he leave the house?



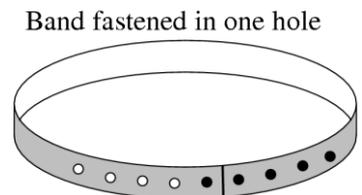
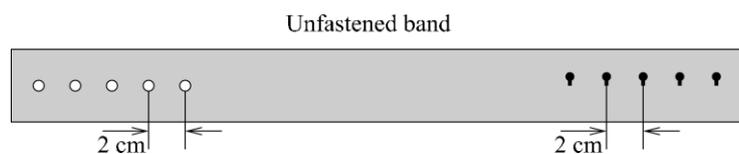
- (A) A (B) B (C) C (D) D (E) E

18. The weights of the four balls are 10, 20, 30 and 40. Which ball weighs 30?



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

19. The band shown below can be fastened in five ways. How much longer is the band fastened in only one hole than the band fastened in all five holes?



- (A) 4 cm (B) 8 cm (C) 10 cm (D) 16 cm (E) 20 cm

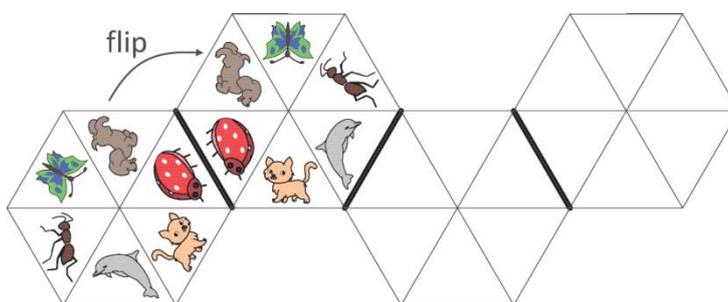
20. In an ancient language, the symbols      represent the numbers 1, 2, 3, 4, and 5. Nobody knows which symbol represents which number. But it is known that:

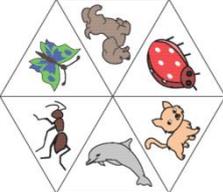
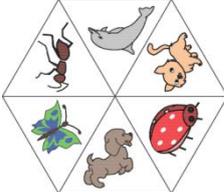
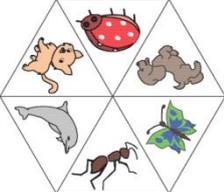
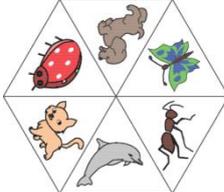
$$\text{atom} + \text{atom} = \text{fish} \quad \text{sun} + \text{sun} = \text{atom} \quad \text{sun} + \text{fish} = \text{hand}$$

Which symbol represents the number 3?

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

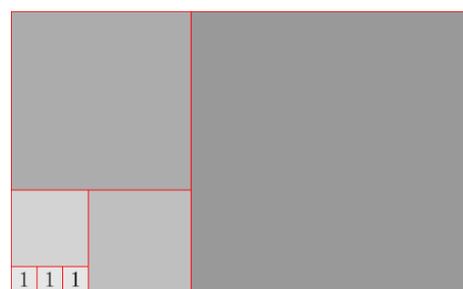
21. A hexagonal tile of painted glass is flipped around one side at a time, as shown in the figure. How will the tile be seen in the last position on the right?



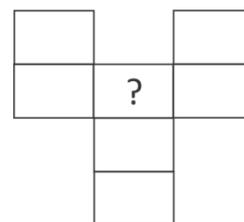
- (A)  (B)  (C)  (D)  (E) 

22. The large rectangle is made up of squares of various sizes. The three smaller squares have areas equal to 1. What is the area of the larger rectangle?

- (A) 165 (B) 176 (C) 187 (D) 198 (E) 200



23. Lia wants to write the numbers from 1 to 7 in the grid shown, one in each cell. Two consecutive numbers can not be neighbors, that is, they can not be in cells with a side or a vertex in common. What numbers may appear in the cell indicated by the question mark?



- (A) All seven numbers.

KSF 2018 – Level E



- (B) Only odd numbers.
- (C) Only even numbers.
- (D) Only number 4.
- (E) Only numbers 1 or 7.

24. To defeat a dragon, Mathias has to cut off all the dragon's heads. But when he cuts off three dragon's heads, one new head immediately grows. Mathias defeats the dragon by cutting off 14 heads in total. How many heads did the dragon have when Matthias began to face it?

- (A) 10 (B) 11 (C) 12 (D) 13 (E) 14