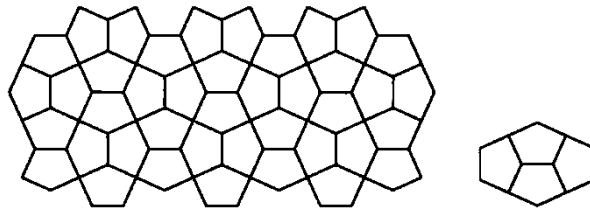


1.  $2+0\times 2+2=$ \_\_\_\_\_.

2. Teacher Zhao's new book is available in two versions: a regular edition and a signed edition. The regular edition is priced at 9 yuan a copy, and the signed edition is priced at 10 yuan. A customer spent 37 yuan to buy several new books, among which there were \_\_\_\_\_ signed editions.

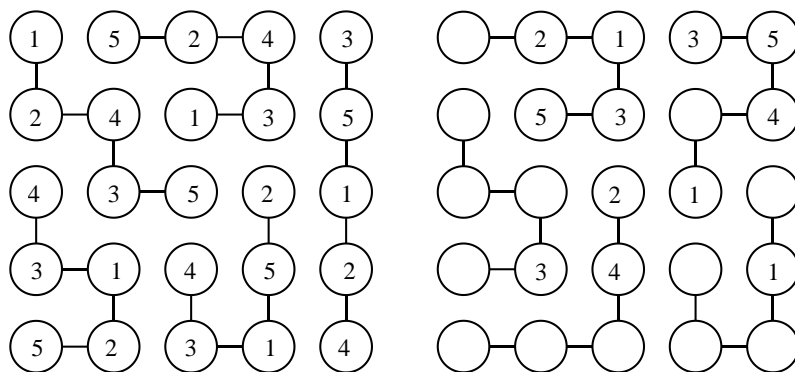
3. The figure on the left below is a mosaic diagram composed of the "Cairo Pentagon". Each pentagon in the figure has the same shape and size. Observe the figure below, there are a total of \_\_\_\_\_ right figures in the left figure. (The right figure can be rotated)



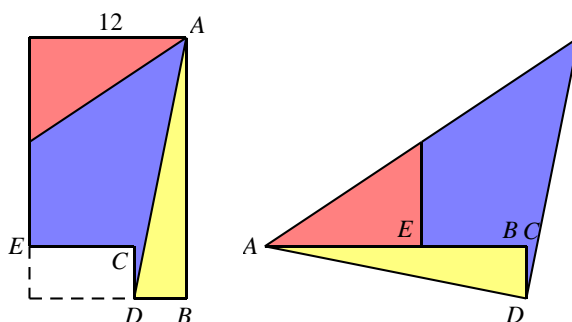
4. Xiao Ming has a box of chess pieces in his hand. The box is full of white pieces at the beginning. He first took out 1 white piece, then put in 2 black pieces, then took out 3 white pieces, and then put in 4 black pieces. At this time, Xiao Ming found that the white pieces in the box were exactly half of the number of black pieces. So there are \_\_\_\_\_ white pieces in the box at the beginning.

5. 12 students formed a circle. Each student found that among the two people next to him or her, there was one boy and one girl. Among the 12 classmates there are \_\_\_\_\_ boys.

6. Fill in the numbers 1 to 5 in each circle so that the numbers in each row, column and line are 5 non-repeating numbers. The figure on the left is an example that meets the conditions. After filling in the figure on the right as required, the five-digit number formed by the numbers in the five circles in the bottom row from left to right is \_\_\_\_\_.

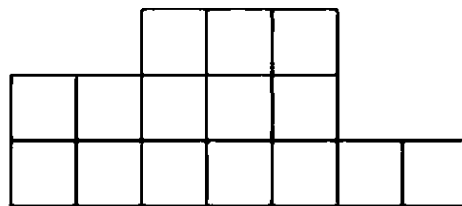


7. Cut a small rectangle from the lower left corner of a rectangular piece of paper, and then cut it into three pieces. These three pieces can be assembled into a triangle. If the width of the rectangle is 12 and the length of AB is 5 times that of CD, then the length of EC is \_\_\_\_\_.



8. There are some whole numbers, such as 121 and 2552. The order of numbers from left to right and from right to left is the same. We call such whole numbers "palindromes". It is known that the sum of two different palindrome numbers is 2022, then the difference between the two palindrome numbers is \_\_\_\_\_.

9. Lili wants to use three kinds of squares with sizes of  $1 \times 1$ ,  $2 \times 2$ , and  $3 \times 3$  to form the figure below (the side length of each small square in the picture is 1), and the total area of the squares used is 15, and no overlap is allowed during the splicing process, and the number of each square is not limited (You don't need to use every type). There are \_\_\_\_\_ different splicing methods. (Different placements or numbers of squares count as different splicing methods.)



10. There is a 2-meter-tall sapling in the courtyard. The witch can prepare two different potions. Each bottle of magical potion can make a sapling grow 3 meters tall, and each bottle of super potion can double the height of a sapling. However, using the super potion will have side effects, which can cause the next potion to have the opposite effect (if A magical potion will make the sapling 3 meters shorter, a super potion will make the sapling half shorter). Super potions have limited raw materials and can only prepare up to 2 bottles, while magical potions have enough raw materials and can be prepared at will. If the witch wants to make the sapling grow to exactly 50 meters, she must prepare at least \_\_\_\_\_ bottles of magic potion.

11. Four peerless masters A, B, C and D met at the top of Huashan Mountain to compete in sword fighting and compete for the title of "No. 1 in the World". The four people drew lots and divided into two groups to determine the winner. The two winners competed again. The first and second place will be decided, and the two losers will decide the third and fourth place. After the competition, the four people communicated, and each said two sentences:

A: I won the battle with C. But I lost to D

B: I deserve the title of No. 1 in the world, and A's ranking is lower than that of C.

C: I was defeated by A. B lost to D in the competition.

D: Fortunately, my ranking is not at the bottom. C is ranked higher than B.

It is known that the number of wins is the same as the number of truths spoken. Then the four-digit number composed of A, B, C and D' ranking in order is\_\_\_\_\_.

For Question 12:

Please fill in the ten-thousands place + thousands place on the answer sheet with the number of what you consider to be the best question in this test; the answer range is from 01 to 11.

Please fill in the hundreds place on the answer sheet with the level of difficulty you consider for the overall test paper, with "1" being the easiest and "9" being the most difficult, totalling nine levels; the answer range is from 1 to 9.

Please fill in the tens place + units place on the answer sheet with the number of what you consider to be the most difficult question in this test; the answer range is from 01 to 11.

(All answers within the specified range will receive points, and all assessments will be considered as the individual's valid assessment of this test paper. No answers or answers beyond the specified range will not receive points.)