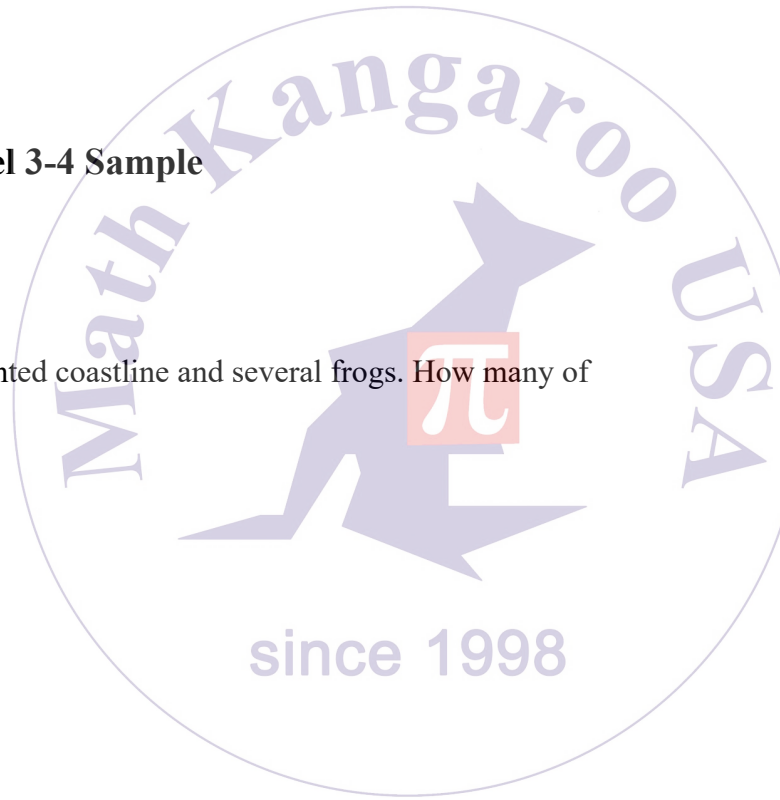
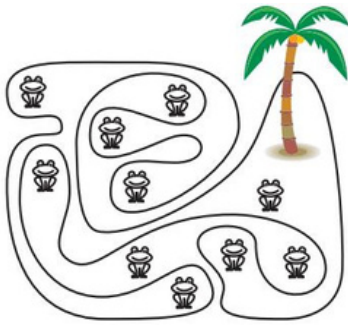


MK Team Level 3-4 Sample



Multiple-choice Questions

1. In the figure, we see an island with a highly indented coastline and several frogs. How many of these frogs are sitting on the island?



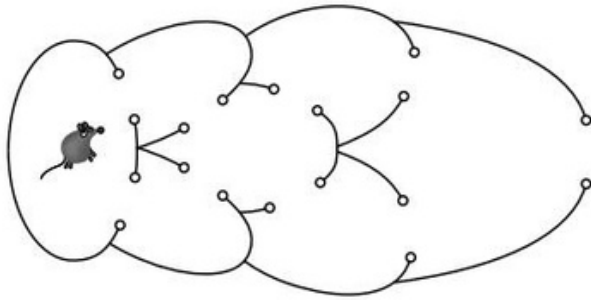
- (A) 5 (B) 6 (C) 7 (D) 8 (E) 9

2. Elli draws this 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?

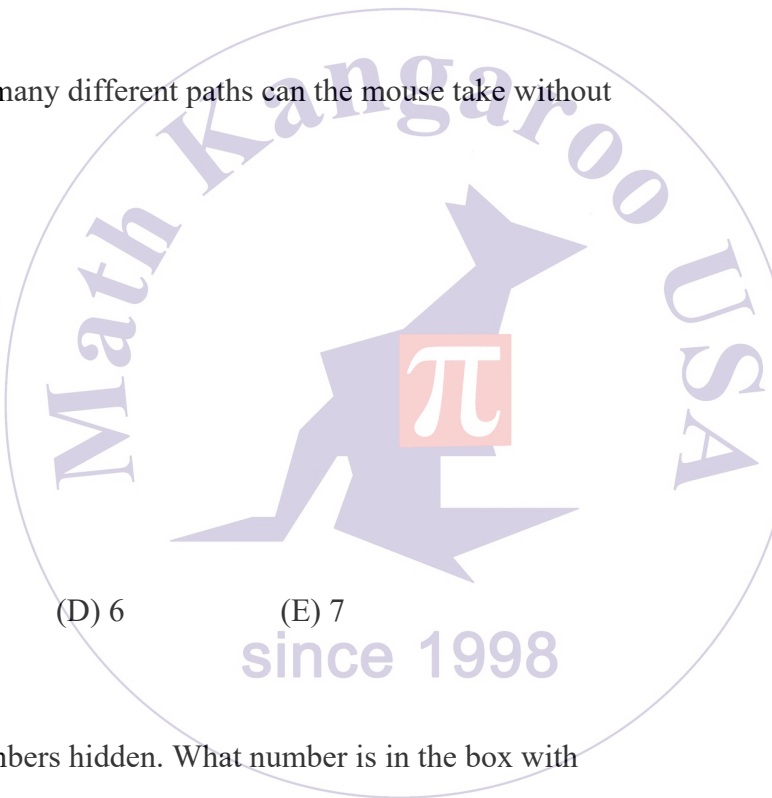
1	5	8	11
4	7	10	14
24	23	13	18
21	19	16	20

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

3. The mouse wants to escape from the maze. How many different paths can the mouse take without passing through the same gate more than once?



- (A) 2 (B) 4 (C) 5 (D) 6 (E) 7

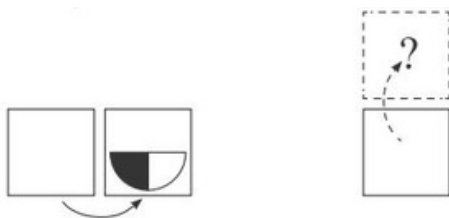


4. The following is an addition table, with some numbers hidden. What number is in the box with the question mark?

	+	11	7	2
6		17	13	8
			?	11

- (A) 10 (B) 12 (C) 13 (D) 15 (E) 16

5. Having turned a card over around its right side, we see what is drawn in the figure. What shall we see if we turn this card over around its upper side?

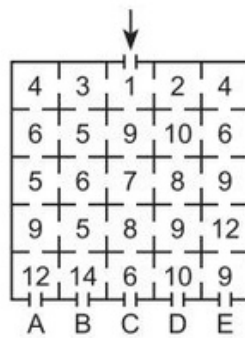


- (A) (B) (C)
- (D) (E)

6. David wants to cook 5 dishes with only 2 stoves. The times needed are 40 min, 15 min, 35 min, 10 min and 45 min. He may only remove a dish when it is fully cooked. What is the shortest total time?

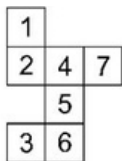
- (A) 60 min (B) 70 min (C) 75 min (D) 80 min (E) 85 min

7. The rooms in Kanga's house are numbered. Baby Roo enters the main door, passes through rooms, and leaves. The numbers of the rooms increase. Which door does he exit from?



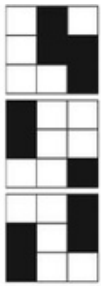
- (A) A (B) B (C) C (D) D (E) E

8. Luisa wants to fold a cube from a paper net. She mistakenly drew 7 squares. Which one must be removed to form a valid cube?

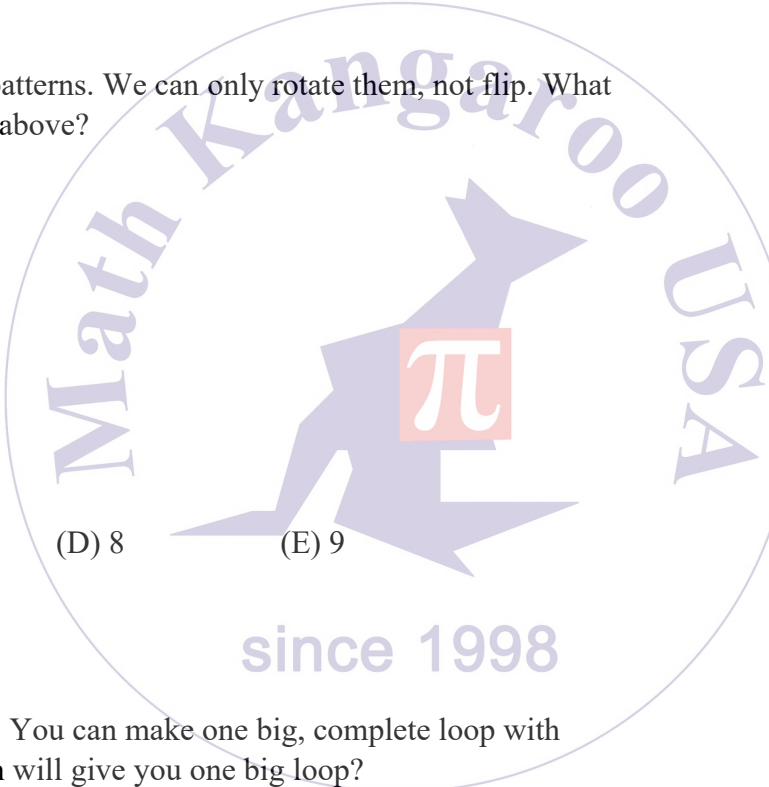


- (A) 1 (B) 2 (C) 3 (D) 6 (E) 7

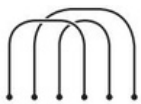
9. We have 3 transparent sheets with the following patterns. We can only rotate them, not flip. What is the maximum number of black squares seen from above?



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

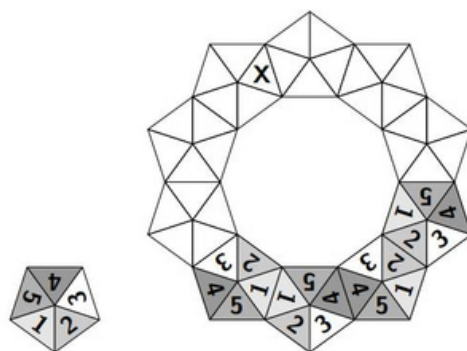


10. Three ropes are laid down on the floor as shown. You can make one big, complete loop with three other pieces of rope. Which of the ropes shown will give you one big loop?



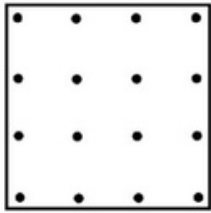
- (A) (B) (C) (D) (E)

11. Amelie wants to build the following figure using 10 of these given shapes... Four shapes have already been placed. Which number goes in the triangle marked with X?

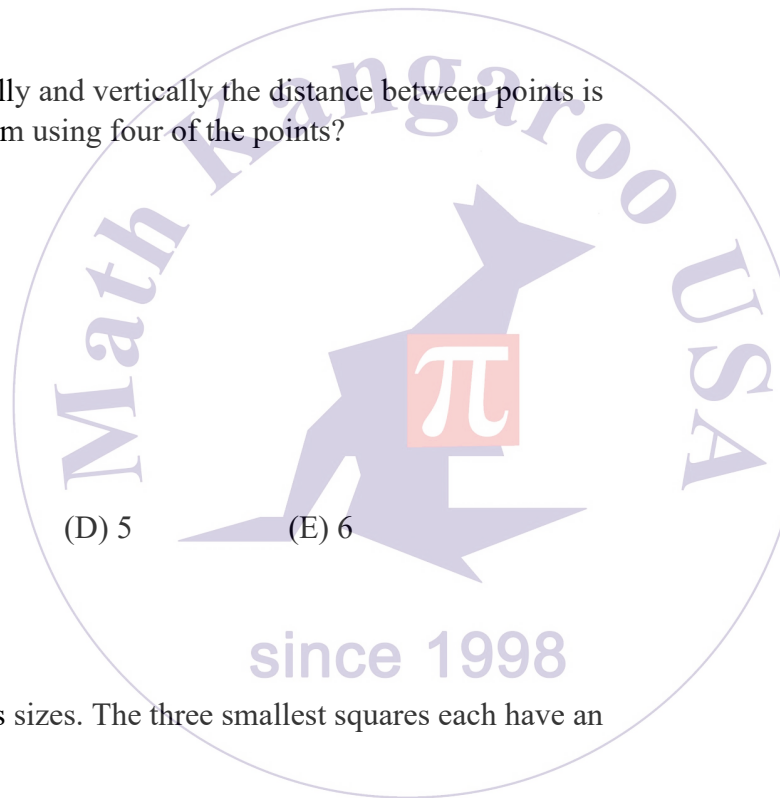


- (A) 1 (B) 2 (C) 3 (D) 4 (E) 5

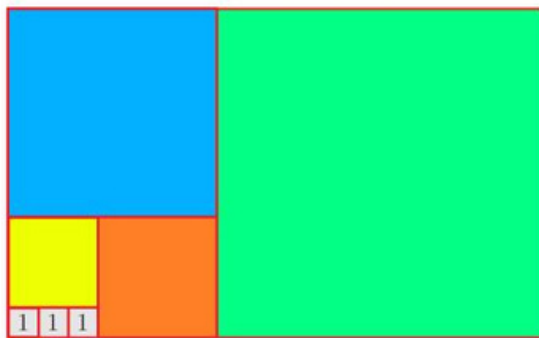
12. The figure shows a dotted sheet. Both horizontally and vertically the distance between points is equal. How many different area squares can you form using four of the points?



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



13. The large rectangle is cut into squares of various sizes. The three smallest squares each have an area of 1. What is the area of the large rectangle?



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

14. Farid has two types of sticks: short ones (1cm), long ones (3cm). Which combinations below can form a square without breaking or overlapping?

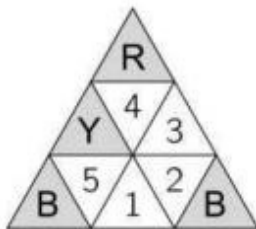


- (A) 5 short and 2 long (B) 3 short and 3 long (C) 6 short
 (D) 4 short and 2 long (E) 6 long

15. In a video game, the final enemy is an evil robot with many heads. To defeat the robot, we have to cut all its heads. If we cut 3 heads, one new head will grow. We can only defeat the robot by cutting off 13 heads in total. How many heads did the robot have in the beginning?

- (A) 8 (B) 9 (C) 10 (D) 11 (E) 12

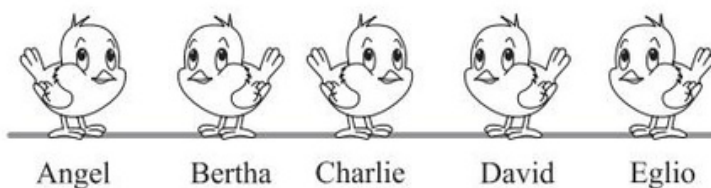
16. Mary has 9 small triangles: 3 of them are red (R), 3 are yellow (Y) and 3 are blue (B). She wants to form a big triangle by putting together these 9 small triangles so that any two triangles with an edge in common are different colours. Mary places some small triangles as shown in the picture. Which of the following statements is true after she has finished?



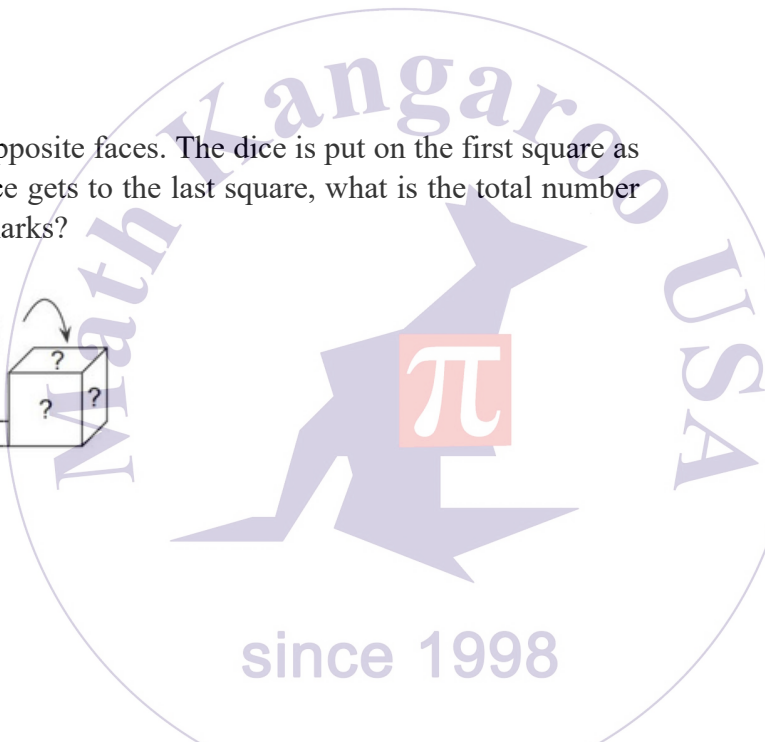
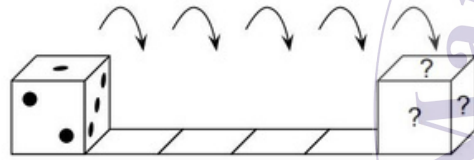
- (A) 1 is yellow and 3 is red (B) 1 is blue and 2 is red (C) 1 and 3 are red
 (D) 5 is red and 2 is yellow (E) 1 and 3 are yellow

Fill-in-the-blank Questions

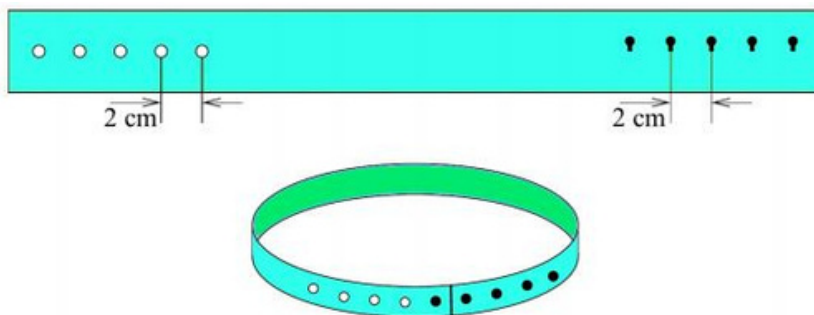
17. Five sparrows sit on a branch, as shown in the figure. Each sparrow chirps the same number of times as the number of sparrows it sees. For example, David chirps three times. Then, one sparrow turns to look in the opposite direction. Again, each of the sparrows chirps the same number of times as the number of sparrows it sees. This time, the total number of chirps is more than the first time. Which of the sparrows has turned to look in the opposite direction?



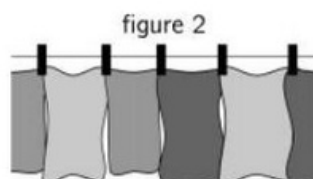
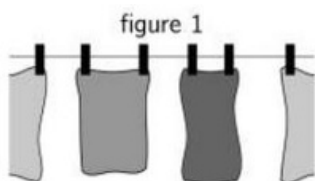
18. A standard dice has 7 as the sum of the dots on opposite faces. The dice is put on the first square as shown and then rolls towards the right. When the dice gets to the last square, what is the total number of dots on the three faces marked with the question marks?



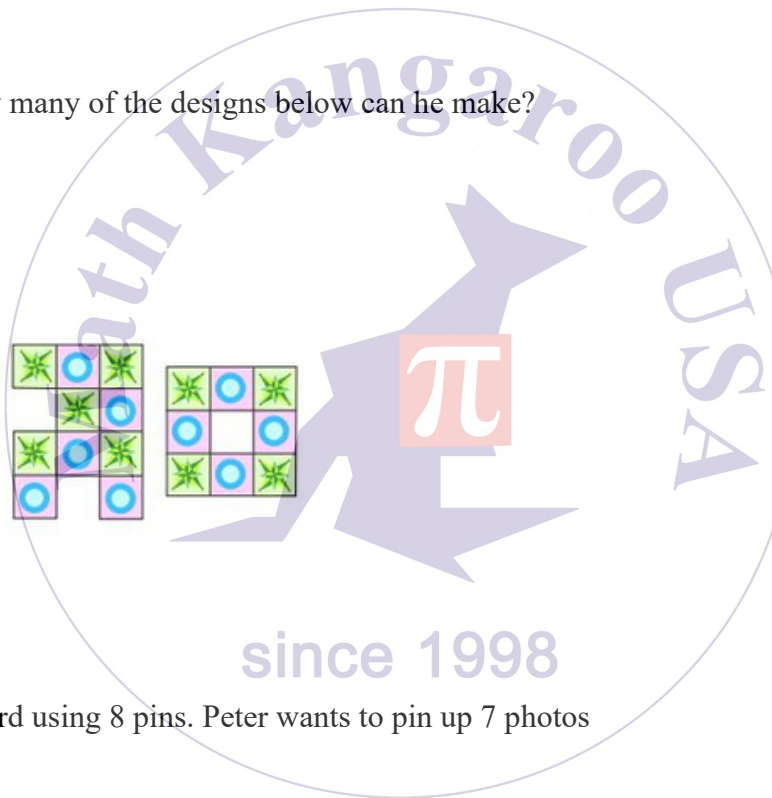
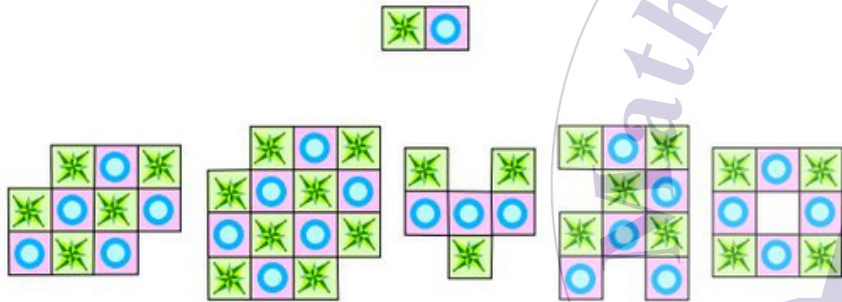
19. The band shown in the figure can be fastened in five ways. For example, the figure below shows the band fastened in one hole. How much longer is the band fastened in one hole than the band fastened in all five holes?



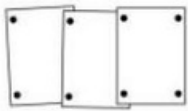
20. Emil started to hang up towels using two pegs for each towel as shown in figure 1. He realised that he would not have enough pegs and began to hang up the towels as shown in figure 2. Overall, he hung up 35 towels and used 58 pegs. How many towels did Emil hang up in the way shown in figure 1?



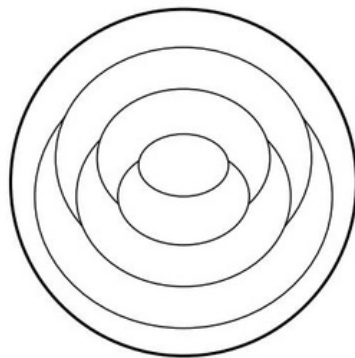
21. Roberto makes designs using tiles like this. How many of the designs below can he make?



22. Linda pinned up 3 photos in a row on a cork board using 8 pins. Peter wants to pin up 7 photos in the same way. How many pins does he need?



23. Cindy colours each region on the pattern either red, blue or yellow. The regions that touch each other have different colours. The outer region is coloured red. How many regions are red?



24. Ten bags each contain a different number of candies from 1 to 10. There are 5 boys. Each boy took two bags. Alex got 5 candies, Bob got 7, Charles got 9, Dennis got 15. How many did Eric get?