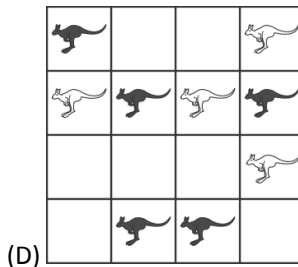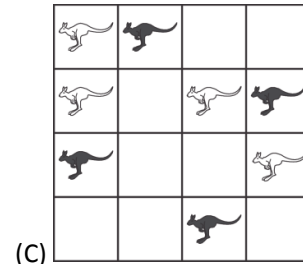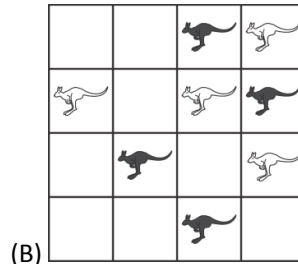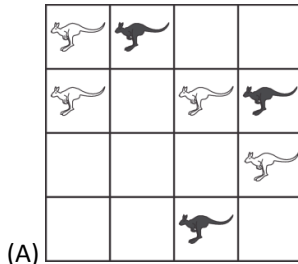# International Contest-Game
MATH KANGAROO

Part A: Each correct answer is worth 3 points.

1. In which figure is the number of black kangaroos bigger than the number of white kangaroos?

    (A)   (B)   (C)

    (D)   (E)

2. Aline writes a correct calculation. Then she covers two digits which are the same with a sticker:

    $$4\boxed{} + 5\boxed{} = 104$$
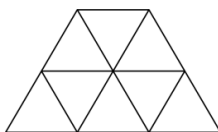
    Which digit is under the stickers?

    (A) **2**   (B) **4**   (C) **5**   (D) **7**   (E) **8**

3. Monica arrived in the Kangaroo Camp on July 25th in the morning and left the camp on August 3rd in the afternoon. How many nights did she sleep in the camp?
    (A) 7   (B) 9   (C) 10   (D) 30   (E) 8

4. How many triangles of all sizes can be seen in the picture below?

    (A) 9   (B) 10   (C) 11   (D) 13   (E) 12

5. In London 2012, the USA won the most medals: 46 gold, 29 silver and 29 bronze. China was second with 38 gold, 27 silver and 23 bronze. How many more medals did the USA win compared to China?
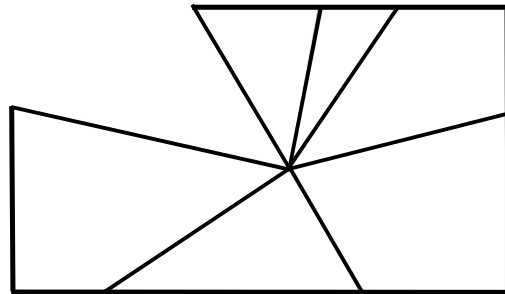   (A) 6   (B) 14   (C) 16   (D) 24   (E) 26

6. There are three families in my neighbourhood with three children each; two of the families have twins. All twins are boys. At most how many girls are in these families?
    (A) 2   (B) 3   (C) 4   (D) 5   (E) 6

7. Vero's mother prepares sandwiches with two slices of bread each. A package of bread has 24 slices. How many sandwiches can she prepare from two and a half packages of bread?
    (A) 24   (B) 30   (C) 48   (D) 34   (E) 26

8. About the number 325, five boys said:
    Andrei: "This is a 3-digit number"
    Boris: "All digits are distinct"
    Vick: "The sum of the digits is 10"
    Greg: "The units digit is 5"
    Danny: "All digits are odd"
    Which of the boys was wrong?
    (A) Andrei   (B) Boris   (C) Vick   (D) Greg   (E) Danny

Part B: Each correct answer is worth 4 points.

9. The rectangular mirror was broken.

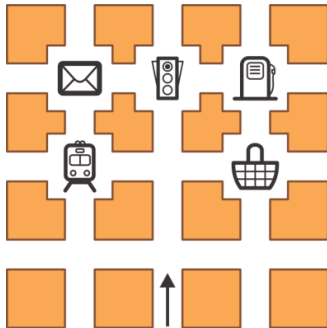   Which of the following pieces is the missing part of the broken mirror?

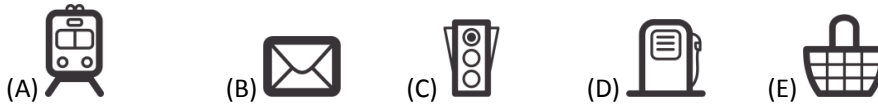   (A)   (B)   (C)

    (D)   (E)

10. When Pinocchio lies, his nose gets 6 cm longer. When he tells the truth, his nose gets 2 cm shorter. When his nose was 9 cm long, he told three lies and made two true statements. How long was Pinocchio's nose afterwards?

    (A) 14 cm   (B) 15 cm   (C) 19 cm   (D) 23 cm   (E) 31 cm

11. John is 33 years old. His three sons are 5, 6 and 10 years old. In how many years will the three sons together be as old as their father?

(A) 4 (B) 6 (C) 8 (D) 10 (E) 12

12. On the map, white lines represent streets. There are pictograms on some intersections (for example, trafic light, basket, tram). Ann started walking at the beginning of the middle vertical street in the direction of the arrow. At every intersection of streets she turned either to the right or to the left. First she turned right, then left, then again left, then right, then left, and finally again left. Which of the landmarks did Ann approach in the end?

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

13. Schoolmates Andy, Betty, Cathie and Dannie were born in the same year. Their birthdays were on February 20th, April 12th, May 12th and May 25th, not necessarily in this order. Betty and Andy were born in the same month. Andy and Cathie were born in the same day of different months. Who of these schoolmates is the oldest?

(A) Andy (B) Betty (C) Cathie (D) Dannie (E) impossible to determine

14. In the Adventure Park, 30 children took part in two of the adventures. 15 of them participated in the "moving bridge" contest, and 20 of them went down the zip-wire. How many of the children took part in both adventures?

(A) 25 (B) 15 (C) 30 (D) 10 (E) 5

15. Which of the five pieces in the answers fits with the piece in the separate picture, so that together they form a rectangle?
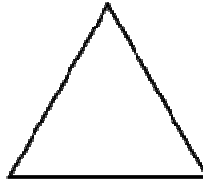
(A) (B) (C) (D) (E)

16. Children in the school club had to arrange fitness balls according to their size from the biggest to the smallest one. Rebecca was comparing them and said: the red ball is smaller than the blue one, the yellow one is bigger than the green one, and the green one is bigger than the blue one. What is the correct order of the fitness balls?

(A) green, yellow, blue, red (B) red, blue, yellow, green (C) yellow, green, red, blue
(D) yellow, green, blue, red (E) blue, yellow, green, red

Part C: Each correct answer is worth 5 points.

17. In the shown triangle, first we join the midpoints of all the three sides. This way, we form a smaller triangle. We repeat this one more time with the smaller triangle, forming a new even smaller triangle, which we colour in red. How many triangles of the size of the red triangle are needed to cover completely the original triangle, without overlapping?

Note: Midpoint of a side is the point that divides the side in two parts of the same length.

(A) 5   (B) 8   (C) 10   (D) 16   (E) 32

18. There are oranges, apricots and peaches in a big basket. How many fruits are there in the basket if the peaches and the apricots together are 18, the oranges and the apricots together are 28 and 30 fruits are not apricots?

(A) 46   (B) 20   (C) 40   (D) 38   (E) 29

19. In December Tom-the-cat slept for exactly 3 weeks. Which calculations should we do in order to find how many minutes he stayed awake during this month?

(A) $(31-7) \times 3 \times 24 \times 60$ (B) $(31-7 \times 3) \times 24 \times 60$ (C) $(30-7 \times 3) \times 24 \times 60$

(D) $(31-7) \times 24 \times 60$ (E) $(31-7 \times 3) \times 24 \times 60 \times 60$

20. Basil has several domino tiles, as shown in the figure. He wants to arrange them in a line according to the well-known "domino rule": in any two tiles that are next to each other, the squares that touch must have the same number of points. What is the largest number of tiles he can arrange in this way?
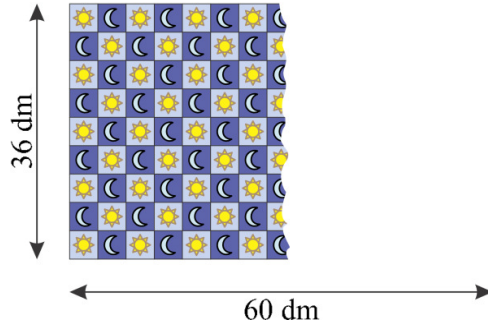

(A) 3   (B) 4   (C) 5   (D) 6   (E) 7

21. Cristi has to sell 10 glass bells that vary in price: 1 euro, 2 euro, 3 euro, 4 euro, 5 euro, 6 euro, 7 euro, 8 euro, 9 euro, 10 euro. In how many ways can Cristi divide all the glass bells in three packages so that all the packages have the same price?

(A) 1   (B) 2   (C) 3   (D) 4   (E) Such a division is not possible.

22. Nancy bought 17 cones of ice-cream for her three children. Misha ate twice as many cones as Ana. Dan ate more ice-cream than Ana but less than Misha. How many cones of ice-cream did Dan eat?
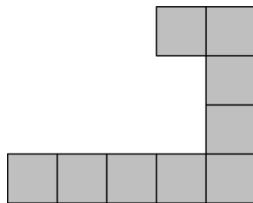
(A) 4   (B) 5   (C) 6   (D) 7   (E) 8

23. Peter bought a carpet 36 dm wide and 60 dm long. The figure shows part of this carpet. As seen, the carpet has a pattern of small squares containing either a sun or a moon. You can count that along the width there are nine squares. When the carpet is fully unrolled, how many moons will be seen?

(A) 68   (B) 67   (C) 65   (D) 63   (E) 60

24. Beatrice has a lot of pieces like the grey one in the picture. At least how many of these grey pieces will she need to make a grey square?

(A) 3   (B) 4   (C) 6   (D) 8   (E) 16