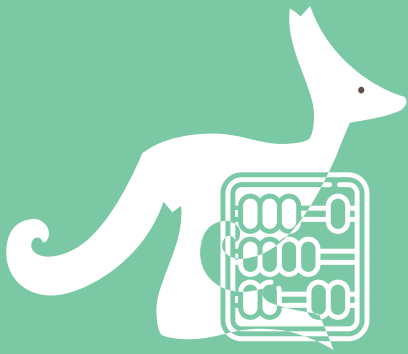




MATH KANGAROO CHINA

考试说明 / Instruction

Time allowed: 75 minutes

考试时长: 75 分钟

Language: English & Chinese

试卷语言: 英文和中文

This is a 30-question multiple-choice competition.

考试包含 30 道单项选择题。

Problems 1 to 10 are worth 3 points each.

1-10 题每题 3 分

Problems 11 to 20 are worth 4 points each.

11-20 题每题 4 分

Problems 21 to 30 are worth 5 points each.

21-30 题每题 5 分

1 point will be deducted for an incorrect answer and

no point for a blank answer.

答错扣 1 分, 不答不扣分。

The full score is 150 (Starting point is 30)

总分为 150 分 (起始分数为 30 分)

Do not open this booklet until you are told to do so.

收到监考老师指令后, 方可打开试卷册。

Mark your answers clearly on the answer sheet using a **2B pencil**.

务必使用 **2B 铅笔**在答题卡上正确填涂自己的答案。

Calculator cannot be used during the competition.

考试期间禁止使用计算器。

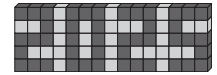
DO NOT discuss problems and solutions in any online or public forum until April 30.

4 月 30 日前请勿以任何形式公开讨论试题和答案。

**Grade 5
&
Grade 6**

3 points

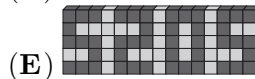
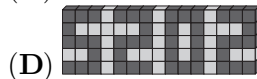
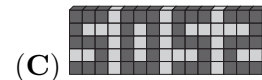
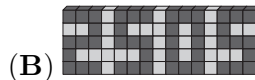
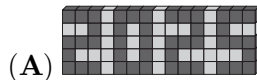
1. Anna has built a wall that displays the year 2025.



Bella stands on the other side of the wall. What does Bella see?

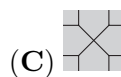
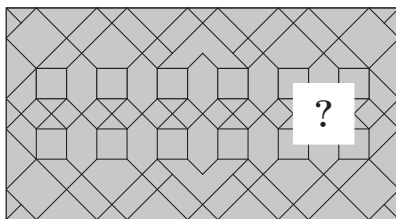
小安建了一面墙，墙的正面显示年份 2025。

小贝站在墙的背面，请问她会看到什么？



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

请问下列哪个选项可以补全这个图案？



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?

小迈有一个写有数字的小册子，左右两侧的页面上有小孔，如图所示。

他先沿虚线折叠右侧页面，透过小孔能看到数字 2、3、5 和 6。

接着，他沿另一条虚线折叠左侧页面。

请问现在他看到的数字之和是多少？

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

4. A cube is decorated by gluing identical grey squares on it.

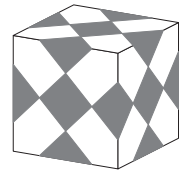
All faces of the cube look the same.

How many grey squares are there in total?

一个立方体表面装饰着相同的灰色正方形贴纸，

且该立方体的每个面看起来都一样。

请问该立方体表面一共贴有多少个灰色正方形贴纸？



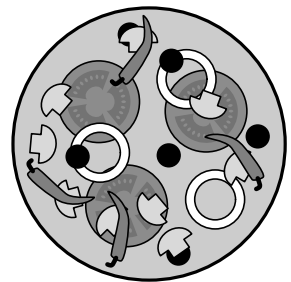
- (A) 30 (B) 20 (C) 18 (D) 16 (E) 14

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 fourth topping he put on the pizza?

小艾在披萨上放了番茄片、黑橄榄、辣椒、蘑菇和洋葱圈，但放置顺序不一定如此。他每次只放一种配料，最终做好的披萨如图所示。

请问他在披萨上放的第四种配料是什么？



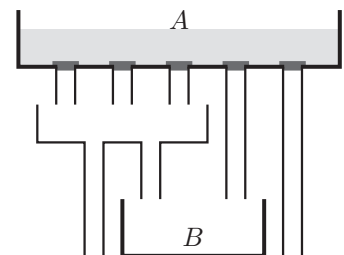
- (A) tomato slices 番茄片  (B) black olives 黑橄榄 
(C) chillis 辣椒  (D) mushrooms 蘑菇 
(E) onion rings 洋葱圈 

6. Container A holds 8 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?

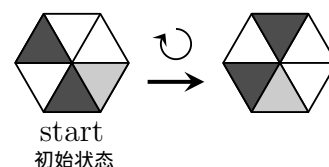
容器 A 里装有 8 升水，当其底部的五个塞子被同时拔出时，水随即流出。

请问流入容器 B 中的水的体积是多少？

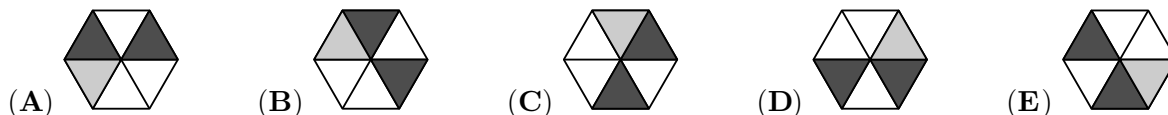


- (A) 3 litres 3 升 (B) 4 litres 4 升
(C) 5 litres 5 升 (D) 6 litres 6 升
(E) 8 litres 8 升

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?



小西旋转一张被划分成六等份的纸，每旋转一次，纸就会顺时针转动一等份。这张纸的初始状态以及旋转一次后的样子如图所示。请问总共旋转八次后，这张纸会是什么样子？



8. The menu of my favourite burger restaurant is written on a board. However the rain has washed away some of the numbers. The burgers are ordered by price.

Which of the following is the price of one of my burgers?

我最喜欢的汉堡店把菜单写在一块板子上，可是雨水把部分数字给冲掉了。已知汉堡按价格排序。

请问下面哪个选项是其中一个汉堡的价格？



- (A) 4.10 (B) 5.50 (C) 5.60
(D) 6.30 (E) 6.60

9. Six children took part in a race.

六个小朋友参加了一场赛跑。

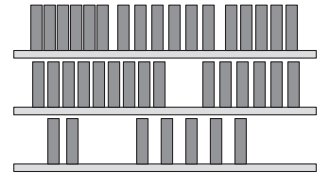
- Biel finished sixth, just behind Ernest.
小贝得了第六名，名次刚好在小欧后面。
- Fatima finished between Ariadne and Ernest.
小法的名次在小安和小欧之间。
- Diana overtook Charles right before the finish line.
小戴恰好在到达终点线之前超过了小查。
- Ariadne reached the finish line right behind Charles.
小安紧随小查之后到达终点线。

Who won the race?

请问谁赢得了比赛？

- (A) Ariadne 小安 (B) Charles 小查 (C) Diana 小戴
(D) Ernest 小欧 (E) Fatima 小法

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?



一个三层书架，上层有 17 本书，中层有 15 本书，下层有 7 本书。小莫想让每层书架上的书一样多，同时又想尽可能少地移动书本。请问她应该从中层书架移动几本书到下层书架？

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

4 points

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.

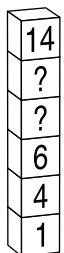
How far from the finish line will the third turtle be when the second turtle finishes?

三只乌龟在参加一场 10 千米赛跑，每只乌龟都匀速前进。当第一只乌龟到达终点时，第二只乌龟已经跑了全程的 $\frac{1}{4}$ ，第三只乌龟已经跑了全程的 $\frac{1}{5}$ 。

请问当第二只乌龟到达终点时，第三只乌龟距离终点还有多远？

- (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?



小微用积木搭建了一座塔，她想用两块带数字的积木替换其中两块带问号的积木，并希望塔中每块积木上的数字都比它下方积木上的数字至少大 2。请问小微有多少种不同的替换方法？

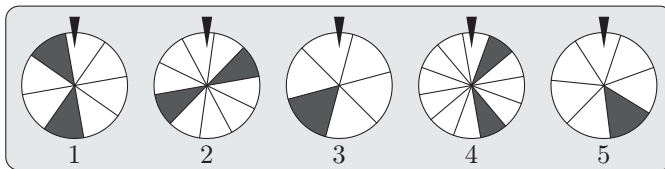
- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7

13. The picture shows five wheels of fortune. Each wheel is divided into a different number of identical parts. 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?

图中有五个幸运转盘，每个转盘被等分成数目不同的若干部分。转盘旋转后停下，如果转盘上方的三角形指针指向阴影部分，即可获奖。

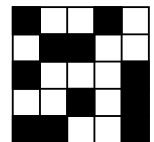
请问哪个转盘赢奖的机会最大？



- (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?

请问下面哪个形状（经任意旋转后）无法放置在大正方形的白色部分？

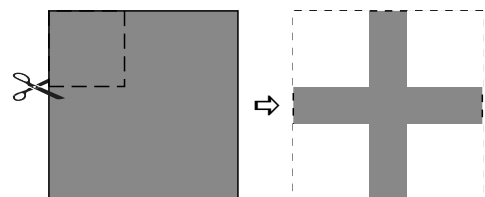


- (A) (B) (C) (D) (E)

15. Janaína 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?

小雅从一张正方形纸的四个角上剪下了四个相同的正方形，如图所示。已知剪下部分的总面积是 16 cm^2 ，剩下十字形的面积是 9 cm^2 。请问这个十字形的周长是多少厘米？



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

16. 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?

学校游泳队正在为接力比赛进行训练，五个游泳队员依次游完相同的距离。下图展示了每个队员完成各自赛程时教练秒表上的时间。已知第一个队员用时 2 分 8 秒。

请问哪个队员用时最短？



- (A) the first 第一个 (B) the second 第二个 (C) the third 第三个
(D) the fourth 第四个 (E) the fifth 第五个

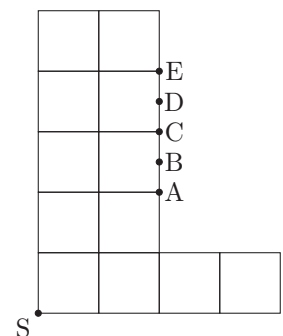
17. Each of the cards shown below have two 3-digit numbers written on them, but some of the digits cannot be seen as they are covered in ink. On one of the cards, the sum of the digits of both numbers is the same. On which card are those two numbers?

下方每张卡片上都写有两个三位数，但部分数字被墨水遮住了。其中一张卡片上的两个数的各位数字之和相等。请问这张卡片是下面哪一张？

- (A) 543 & 11 (B) 58 & 11 (C) 982 & 1
(D) 211 & 6 (E) 777 & 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?

图中形状由相同的正方形组成。点 B 位于点 A 和点 C 正中间，点 D 位于点 C 和点 E 正中间。小玛想把该图形分成面积相等的两部分。请问她应该用直线将点 S 和点 A、B、C、D、E 中的哪一点连接起来？



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

19. Hasan 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.

	?		
		0	
?			?
	?		

When he finishes, what will the sum of the numbers in the cells shown with a question mark be?

小浩想在图中的每个方格中填写 0 或 1，使得每行、每列以及每条对角线上的数字之和都等于 3。他已经在其中一个方格中填写了 0。

请问填写完成后，图中带问号的方格中的数字之和是多少？

- (A) 1 (B) 2 (C) 3 (D) 4
(E) It cannot be calculated 无法计算

20. Mary and Paul each wrote down three 3-digit numbers using the digits 1 to 9 exactly once. Then they ordered their numbers as smallest, middle and largest. Mary wrote down the largest possible value the middle number could have. Paul wrote down the smallest possible value the middle number could have. What is the difference between their two middle numbers?

392	487	516
smallest	middle	largest
最小数	中间数	最大数

小玛和小保各自写下了三个由 1 到 9 组成的三位数，每个数字只使用一次。然后，他们将各自的三个数按照最小数、中间数和最大数排列。小玛写下中间数能取到的最大可能值，小保写下中间数能取到的最小可能值。请问这两个中间数的差是多少？

- (A) 642 (B) 684 (C) 864 (D) 888
(E) none of the previous 上述答案均不正确

5 points

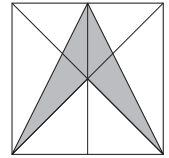
21. A witch had 10 apples, 9 bananas and 6 pears. One day she performed some magic and turned each of her pieces of fruit into one of the other two types. For example, she changed each apple into either a banana or a pear. She now has 15 apples, 7 bananas and 3 pears. How many of the apples did she change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

before 变化前	10	9	6
after 变化后	15	7	3

一个女巫原来有 10 个苹果、9 根香蕉和 6 个梨。有一天，她施展了魔法，把每种水果变成了另外两种水果中的一种。例如，她把每个苹果都变成了一根香蕉或一个梨。现在她有 15 个苹果、7 根香蕉和 3 个梨。请问她把多少个苹果变成了香蕉？

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

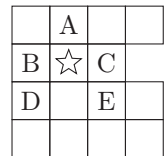
22. The side-length of the square shown in the diagram is 10 cm. The line down in the middle of the square divides it into two equal rectangles. What is the area of the shaded region?



图中正方形的边长是 10 cm。正方形中间的竖线将其分成了两个大小相等的长方形。请问阴影部分的面积是多少？

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

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?



小乔把右图分成了五个形状相同的部分，每个部分均由三个正方形组成。请问标有星星的正方形和哪个字母所在的正方形在同一个部分？

- (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 following conversation with Facu:

Mateo: “What day is today?”

Facu: “Saturday”

Mateo: “What day will be tomorrow?”

Facu: “Friday”

On which day did this conversation take place?

小福在星期二、星期四和星期六从来不说真话，而在其他四天他总是说真话。

有一天，小马和小福进行了下面的对话：

小马：“今天是星期几？”

小福：“星期六。”

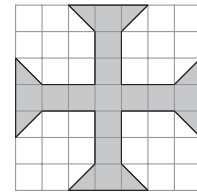
小马：“那明天是星期几？”

小福：“星期五。”

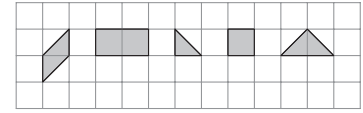
请问这段对话发生在星期几？

- (A) Monday 星期一 (B) Tuesday 星期二 (C) Wednesday 星期三
(D) Thursday 星期四 (E) Friday 星期五

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?

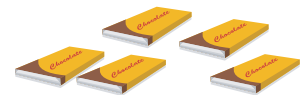


小朱想用十字形下方的碎片拼出图中的十字形，每种碎片他都有很多块，并且可以根据需要旋转碎片。要求碎片之间不能重叠。

请问最少需要用多少块碎片才能拼出这个十字形？

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

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

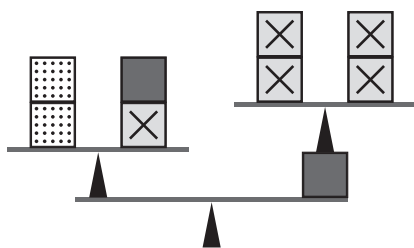


小萨的巧克力数量是小娜的三倍，后来小萨把自己四分之一的巧克力给了小娜。现在小萨比小娜多 6 块巧克力。请问小萨原来比小娜多多少块巧克力？

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

27. Some blocks are balanced on top of each other, as shown. Blocks that are shaded in the same way have the same weight.

一些积木通过相互叠放保持平衡。阴影标记方式相同的积木重量相等。



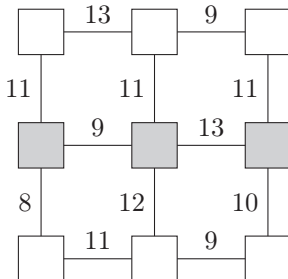
Ville wants to order the three different types of square block from heaviest to lightest, from left to right. What order should Ville obtain?

小威想把这三种不同类型的正方形积木按从重到轻的顺序从左至右排列，请问他得出的顺序是什么？

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

28. 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.

小帕想将数字 1 至 9 填入图中的方格里，每个方格填一个数字。她希望任意两个相邻方格里的数字之和等于连接这两个方格的线上所显示的数字。

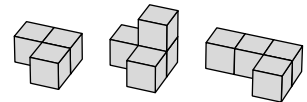


What is the sum of the numbers she writes in the shaded row?

请问她在阴影行里填写的数字之和是多少？

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

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



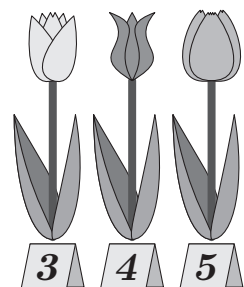
- (A) (B) (C) (D) (E)

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?

小泽想购买一些花，图中显示了她可以购买的三种花的价格。

请问她可以购买多少种不同组合的花束，使得总价恰好是 23？



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