COMO-马来西亚数学邀请赛：总决赛

MALAYSIA MATHEMATICS INVITATIONAL : FINAL CHAMPIONS

3	**2017** **小学三年级 STANDARD 3** **1 小时**	3

INSTRUCTIONS AND INFORMATION

1. Do not open the booklet until told to do so by your teacher.
   未获监考老师许可之前不可翻开此比赛试卷。

2. This question paper consists of 30 questions.
   本试卷共有 30 题。

3. Diagrams are NOT drawn to scale. They are intended only as aids.
   题目所提供之图形只是示意图，不一定精准。

4. Neither mathematical tables nor calculators may be used.
   不准使用数学表或计算器。

5. Write your answers in the answer boxes on the **separate answer sheet** provided.
   答案请另填写在所提供的作答卷的指定位置上。

6. Working may be shown in the space below each question.
   算式可写在试卷的任何空格里。

7. **Marks are awarded for correct answers only**.
   只有正确的答案才能得分。

8. The MiMAS reserves the right to re-examine students before deciding whether to grant official status to their score.
   为确保竞赛之公平及公正，MiMAS 主办单位保留要求考生重测之权利。

1 - 10 题，每题 3 分。
Question 1-10, 3 marks each.

1. 4 个千、31 个百和 6 个一合起来是多少？

4 thousands, 31 hundreds and 6 ones is equal to?

(A) 4316 (B) 4370 (C) 7160 (D) 7106

2. 计算：35 公分 3 毫米－26 公分 5 毫米＝(　　)毫米

Compute: 35 cm 3 mm – 26 cm 5 mm = (　　) mm

(A) 78 (B) 82 (C) 88 (D) 96

3. 计算：24＋25 × 6＝?

Compute: 24 + 25 × 6 =?

(A) 294 (B) 218 (C) 174 (D) 55

4. 计算：200 ÷ (25 ÷ 2)＝?

Compute: 200 ÷ (25 ÷ 2)＝?

(A) 32 (B) 16 (C) 12 (D) 8

5. 计算：$2415+1876-574=?$

Compute: $2415+1876-574=?$

(A) 3684 (B) 3717 (C) 3740 (D) 3817

6. 四枝原子笔的价钱等于七枝铅笔的价钱，由此可以看出：

The price of four pens is equal to seven pencils. We know:

(A) 一枝原子笔的价钱比较贵
A pen is more expensive.

(B) 一枝铅笔的价钱比较贵
A pencil is more expensive.

(C) 一样贵
Same.

(D) 无法判断
Can not be judged.

7. 「$349 \div 8=43...5$」可以用下列哪一个算式来验算？

Which of the following equation can used to check "$349 \div 8=43...5$"?

(A) 43×8 (B) $43 \times 5+8$ (C) $43 \times 8+5$ (D) $43 \times 8-5$

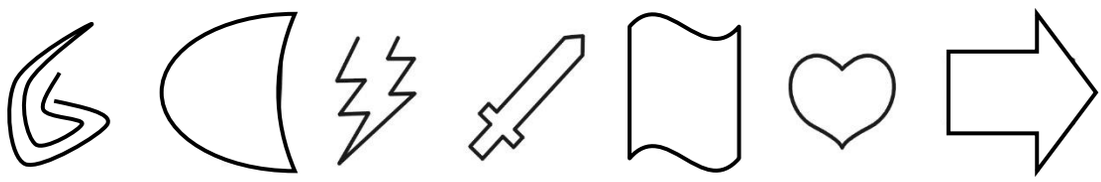
8. 每边长 14 公分的正三角形和每边长 13 公分的正方形，周长相差几公分？

How many centimeter (cm) difference in perimeter between equilateral triangle with 14 cm and square with 13 cm?

(A) 8 (B) 10 (C) 12 (D) 14

9. 下图中共有几个图形是有周界的?

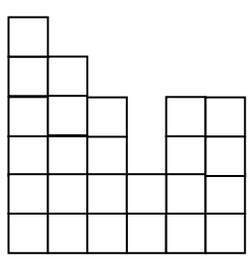
On the figure below, how many has perimeter?



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

10. 每一个方格是 1 平方公分，如图，还需要多少个 1 平方公分，才能排成一个 36 平方公分大的正方形?

Every square is 1 cm^2, as figure. How many 1 cm^2 square required to build a large square with 36 cm^2?



(A) 11 (B) 12 (C) 13 (D) 14

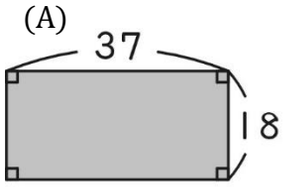
11 - 20 题，每题 4 分。

Question 11-20, 4 marks each.

11. 涂色比赛，谁涂的图形面积最大?

On coloring competition, who has color the largest shape?

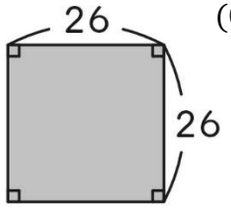
(A)



皮卡丘

Pikachu

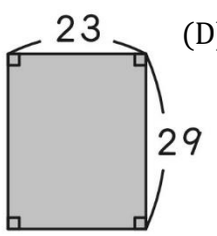
(B)



火影忍者

Naruto

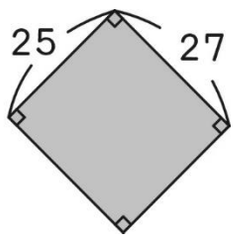
(C)



鲁夫

Luff

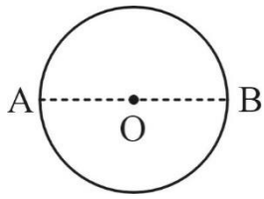
(D)



柯南

Conan

12. 下列哪一个方法<u>无法</u>画出与右图大小不同的圆？



Which of the following method <u>CAN'T</u> draw a circle which has different size with the circle on the right figure?

(A) 只改变 O 点的位置
Only change the location of point O.

(B) 只改变 O 点到 A 点的距离
Only change the distance between point O and point A.

(C) 只改变 A 点到 B 点的距离
Only change the distance between point A and point B.

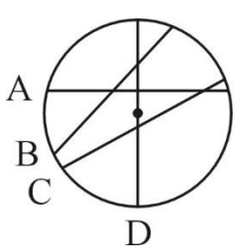
(D) 只改变 O 点到 B 点的距离
Only change the distance between point O and point B.

13. 一个四边形不可能只有几个直角？

How many right angle <u>CAN'T</u> a quadrilateral have?

(A) 1 (B) 2 (C) 3 (D) 4

14. 右图中哪一条线最长？



Which is the longest line on the right figure?

(A) A (B) B

(C) C (D) D

15. 甲的身高比乙矮 8 公分 7 毫米，比丙矮 5 公分 4 毫米。乙和丙的身高相差几毫米？

A is 8 cm 7 mm shorter than B, A is 5 cm 4 mm shorter than C. What is the difference of height between B and C in mm?

(A) 141 (B) 120 (C) 33 (D) 28

16. 玩纸牌游戏，全部有 45 张牌，每人发 6 张，可发给几人？还剩下几张？

Playing card games, it has 45 cards. If 6 cards per person, how many persons are there? How many cards leave?

(A) 7 人，2 张
7 persons, 2 cards

(B) 8 人，2 张
8 persons, 2 cards

(C) 7 人，3 张
7 persons, 3 cards

(D) 8 人，3 张
8 persons, 3 cards

17. 用 4、9、8、5 四个数字组成四位数，数字不能重复，将这些四位数由小排到大，总共有 24 个四位数，请问排在第 10 个的四位数是多少？

There are 24 four-digit numbers formed using the digit 4, 9, 8 and 5, if repetition are not allowed. What is the 10th four-digit number when arranges these four-digit numbers from small to large?

(A) 5498 (B) 5849 (C) 5894 (D) 6489

18. 在数线上，甲蚂蚁在数 1542 的位置上，乙蚂蚁在数 1063 的位置上，甲蚂蚁先往右边移动 68，乙蚂蚁再往左边移动 94，请问此时两只蚂蚁相距多少？

On number line, ant A is on the location of number 1542, and B is on number 1063. Ant A move 68 to the right first, then ant B move 94 to the left. What is the distance between these two ants now?

(A) 1282 (B) 641 (C) 816 (D) 1574

19. 皮皮抄错了题目，将加数 725 看成 752，又把加法看成减法计算得到 918。原来的正确答案是多少？

Pierre was wrong copy the question, he mistook add 725 as 752 and mistook the addition as minus. The answer becomes 918. What is the correct answer?

(A) 2485 (B) 2395 (C) 945 (D) 891

20. 甲的钱是乙的 6 倍，乙的钱是丙的 42 倍，甲的钱是丙的几倍？

The money of A is 6 times of B, money of B is 42 times of C. The money of A is how many times of C?

(A) 7 (B) 56 (C) 112 (D) 252

21 - 30 题，每题 5 分。

Question 21-30, 5 marks each.

21. 有一个四位数，将其个位数字删去后得到一个三位数，这两数和为 2216，请问原四位数是多少？

A four-digit number, it becomes a three-digit number after deleted the ones-digit, the sum of these two number is 2216. What is the original four-digit number?

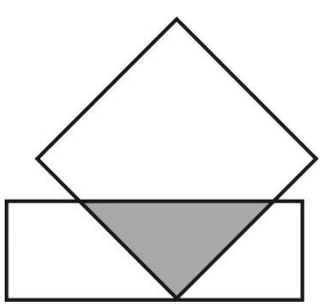
22. 有一个正整数把自己与自己相加、相减、相乘、相除的 4 个结果加起来的总和是 144，则这个数是多少？

There is a positive integer to add its own with its own, subtraction, multiplication, divide, the sum of these 4 results is 144. What is this number?

23. Whitehead 是英国著名数理逻辑学家与剑桥大学教授，下面是他给学生出的一道题：A、B、C 各有硬币若干枚，A 先将自己的硬币分一些给 B 与 C，使得他们的硬币各增加了一倍，之后，B 将自己的硬币分一些给 A 与 C，使得他们的硬币也各增加了一倍，最后，C 将自己的硬币分一些给 A 与 B，使得他们的硬币也各增加了一倍，这样，3 人的硬币数量刚好都是 8 枚，请问 A 原本有多少枚硬币？

Whitehead is a British famous mathematical logician and professor of Cambridge University, below is a question he give student:
A, B and C each have a number of coin, A give some coin to B and C first, doubles the number of coin of them. Then B give some coin to A and C, doubles the number of coin of them too. Last, C give some coin to A and B, doubles the number of coin of them. After that, number of coin of each of them are 8. How many coin does A has originally?

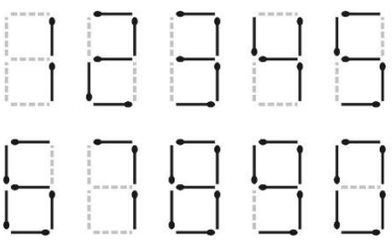
24. 图中是一个 2 公分×2 公分的正方形和一个 3 公分×1 公分的长方形。正方形的一个顶点位于长方形的一条边上，长方形的边分别平行于正方形的对角线。请问涂色部分的面积是多少平方公分？



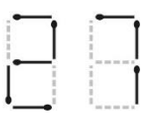
On the right figure, it has a 2 cm x 2 cm square and a 3 cm x 1 cm rectangle. One vertex point of square is on the one side of rectangle, the side of rectangle are parallel to the diagonal of the square respectively. What is the area of the shaded area in unit cm^2?

25. 如图(一)，用不同根数的火柴棒可以按照电子计算器的显示方式，摆放出各个不同的整数 0、1、2、3、4、5、6、7、8、9。
例如：8 根火柴棒可以摆出 27，如图(二)，就视为一种摆法，那么如果每次摆放都用尽 8 根火柴棒，你能够摆出多少个不同的整数？

On the figure 1, it is the digital integer number, 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9, formed by different number of sticks.
For example, 8 sticks can form number of 27, as figure 2. How many different integer can be formed by all 8 sticks?



图(一)
Figure 1



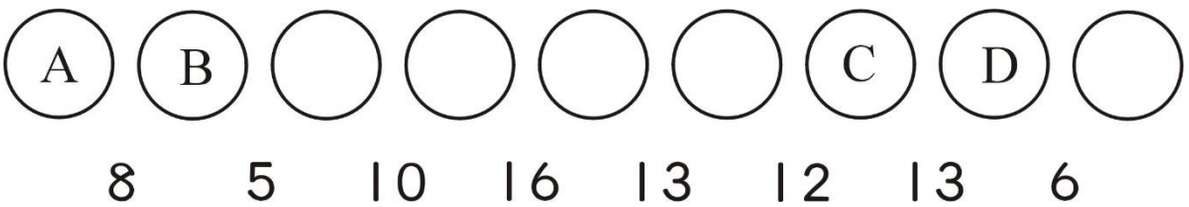
图(二)
Figure 2

26. 学校举行拔河比赛，如果每 2 位男老师和 7 位女老师编成一队，将会多出 8 名男老师，如果每 2 位男老师和 4 位女老师编成一队，将会多出 2 名男老师，那么男老师共有多少名？

The school held a tug of war, if every 2 male teachers with 7 female teachers form a team, it leaves 8 male teachers. If every 2 male teachers with 4 female teachers form a team, it leaves 2 male teachers. How many male teachers are there?

27. 将 1～9 这 9 个数字填入图中的 9 个圆圈中，每个数字只能用一次，使得任意相邻两个圆圈内所填数字之和等于它们下列的数，例如 A＋B＝8，C＋D＝13，那么由$\overline{ABCD}$组成的四位数是？

Use 1~9 to fill in the 9 circles on below, repetition are no allowed, the sum of any two adjacent circles is equal to the number below of them, i.e. A+B=8, C+D=13. What is the four-digit number of $\overline{ABCD}$?



28. 下面一个 2015 位数是这样写出的：12793……，从第三位起，每一位数都是前面 2 位的和的 2 倍再加 1 所得结果的个位数，那么这个数最后三位所组成的三位数是？

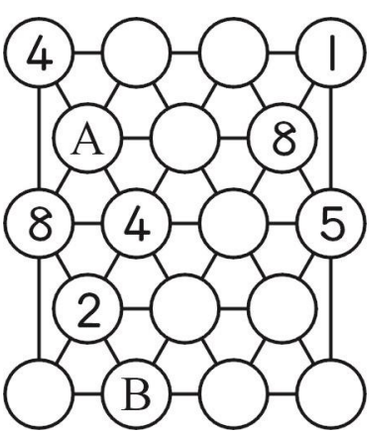
A 2015-digit number which is written as: 12793……, starting from the third digit, each digit is the ones-digit of the result of 2 times of the sum first two digit plus one. What is the three-digit number formed by the last 3 digit of this number?

29. 华华拿了一叠作业本发给 A、B、C、D、E、F、G 七位同学，她依照从上到下顺序开始，第一本发给了 A，将第二本放到最下面，再将第三本发给了 B，再将第四本放到最下面，她连续做了许多次，直到作业本全发完，大家发现每个人正好都拿到自己的作业本，那么这叠作业本原本从上到下的第二本是谁的？

Hwa gives A, B, C, D, E, F and G seven students work books. She starts from top to bottom, give A the first book, put the second book into the bottom, give B the third book, put the 4th book into the bottom, she has done many times in succession until finish the books. Everyone just get their own book. Who is the owner of the second book from top to bottom of these work books?

30. 在图中的每个圆圈内填入 1～9 任一个数字，使得所有有线段连接的相邻两个圆圈内的数字的差至少为 2，而且每个数字都恰好只出现 2 次，那么 A×B 是多少？

Fill in the every circle on the right figure, use a number 1~9, makes the difference between all two adjacent circles, has a line between two circles, is at least 2. Every number is only appear 2 times. What is the value of A×B?



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