

COMO-马来西亚数学邀请赛：总决赛

MALAYSIA MATHEMATICS INVITATIONAL : FINAL CHAMPIONS

5

2017

小学五年级  STANDARD 5

5

1 小时

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. $446 + (863 - 147) \times 125 = ?$

- (A) 76850 (B) 78632 (C) 86956 (D) 89946

2. 四位数 $50\square3$ 是 11 的倍数， \square 内可以填上多少？

Four-digit number $50\square3$ is multiple number of 11, which of the following number can be fill into \square ?

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

3. $4.2 \times 1.25 \times 0.25 \times 3 \times 8 = ?$

- (A) 31.5 (B) 32.5 (C) 30.5 (D) 35.5

4. $666 \times 1548 - 1096 \times 333 = ?$

- (A) 485600 (B) 884400 (C) 333000 (D) 666000

5. 在小于 50 的整数中， $[120]$ 的因子共有多少个？

How many integer factor of $[120]$ is below 50?

- (A) 12 (B) 13 (C) 14 (D) 16

6. 有一个小数，去掉小数点后读作一千八百零五，没去掉小数点时只读二个零，请问这个小数是多少呢？

One decimal number, it reads one thousand eight hundred and five after remove the decimal point, it reads only two zero when it did not remove the decimal point. What is this decimal point?

- (A) 180.5 (B) 0.1805 (C) 0.01805 (D) 1.0805

7. 如果 $856 \div 4 + 364 = 34 \times \square$ ，则 $\square = ?$

If $856 \div 4 + 364 = 34 \times \square$, then $\square = ?$

- (A) 15 (B) 17 (C) 18 (D) 19

8. 一个空正方体容器，里面每边长 0.4 公尺，注水 20 公升后，水深为多少公分？

An empty cube container, every side inside the cube is 0.4 m. What is the water height in unit cm, after fill in 20 liter water?

- (A) 50 (B) 125 (C) 12.5 (D) 3.2

9. 等腰 Δ 的两边长分别为 5 和 11 公分，则此等腰 Δ 的周长为多少公分？

Two side of an isosceles Δ is 5 cm and 11 cm. What is the perimeter of this isosceles Δ in unit cm?

- (A) 20 (B) 21 (C) 21 or 27 (D) 27

10. 有一个正方体的体积为 A 立方公分，表面积为 B 平方公分，如果 $A=B$ ，则 A 与 270 的最大公因子是多少？

The volume of a cube is $A \text{ cm}^3$, the surface area is $B \text{ cm}^2$. What is the highest common factor of A and 270, if $A = B$?

- (A) 6 (B) 18 (C) 54 (D) 135

11 - 20 题，每题 4 分。

Question 11-20, 4 marks each.

11. 面积为 180 平方公分的等腰三角形，腰上的高为 15 公分，另一个边上的高为 12 公分，这个等腰三角形的周长为多少公分？

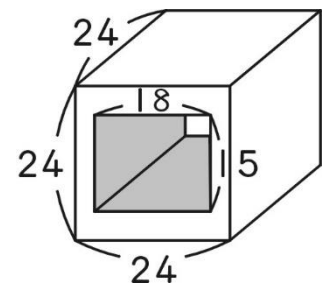
The area of isosceles triangle is 180 cm^2 . The height of the waist is 15 cm. The height of another side is 12 cm. What is the perimeter of this isosceles triangle in unit cm?

- (A) 64 (B) 78 (C) 84 (D) 90

12. 算出右图中空水泥块的体积是多少立方公尺？(单位：公尺)

What is the volume of the empty cement block in the right figure? (unit : m)

- (A) 7344 (B) 7296
(C) 6586 (D) 6698



13. 12 边形的内角和是几度？

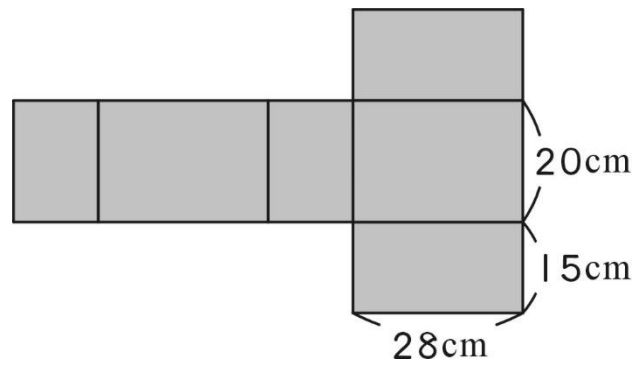
What is the sum of degrees of interior angles of dodecagon?

- (A) 2160 (B) 1980 (C) 1800 (D) 1620

14. 右图是长方体的展开图，面积是多少平方公分？

The right figure is an expanded view of cuboid. What is the area of it in unit cm^2 ?

- (A) 1820
(B) 2240
(C) 2560
(D) 2680



15. 粗心的小马在写题目时，将某数的3倍加4，看成某数的4倍减3，算出的答案是857，那么此题正确的答案是多少？

When Beh does question, he mistook "3 times of a number plus 4" as "4 times of a number minus 3", the answer becomes 857. What is the correct answer?

- (A) 466 (B) 649 (C) 854 (D) 972

16. 小佑和四位朋友一起搭乘火车，只买了3张座票，其余是站票，他们决定轮流坐在位置上，乘车时间总共2小时，请问每人平均坐在位置上多少分钟？

Sam takes a train with four friends together. Their only have 3 seat ticket, the rest is stand ticket so they decided to sit in turns. The total travel time is 2 hours. How many minutes does everyone sit in an average?

- (A) 90 (B) 72 (C) 54 (D) 36

17. 有一袋糖果在 70~80 颗之间，若平分给 6 人刚好分完，若平分给 9 人也刚好分完，这袋糖果可能有几颗？

There is a bag of candy about 70 to 80 candy, it has no remain if split it equally to 6 persons, it has no remain also if split it equally to 9 persons. How many candy are there?

- (A) 70 (B) 72 (C) 76 (D) 78

18. 若 $\star \times \bullet = 119$, $\bullet \times \square = 187$, $\square \times \star = 77$, 如果 \star 、 \bullet 、 \square 都是整数，那么 \star 、 \bullet 、 \square 三个数的和是多少？

If $\star \times \bullet = 119$, $\bullet \times \square = 187$, $\square \times \star = 77$ and \star , \bullet and \square are all integer, what is the sum of \star , \bullet and \square ?

- (A) 31 (B) 33 (C) 35 (D) 37

19. 某数原本要减 0.198，但是小白又误把减看成加，算出来的结果是 1.668，请问原本的正确答案是多少？

A number has to minus 0.198 originally, however Beh mistook minus as addition, the result becomes 1.668. What is the correct answer?

- (A) 2.064 (B) 1.272 (C) 1.448 (D) 1.866

20. 甲比乙多 $\frac{1}{2}$ 倍，乙比丙多 $\frac{1}{2}$ 倍，请问甲比丙多几倍？

A more than B $\frac{1}{2}$ times, B more than C $\frac{1}{2}$ times. How many times does A more than C?

- (A) 1 (B) $\frac{1}{2}$ (C) $\frac{5}{4}$ (D) $\frac{9}{4}$

21 - 30 题 , 每题 5 分。

Question 21-30, 5 marks each.

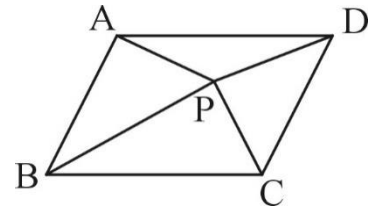
21. 对两位数进行一次操作是指：将这个两位数的两个数字相乘，如果乘积是个两位数，就写下这个乘积；如果乘积是个一位数，就在这个乘积的前面添上 2。如对 67 连续进行三次操作依次得到：67→42→28→16。那么对 39 连续进行 100 次操作后得到的数是？

One operation of two-digit number means: multiplies two number of this two-digit number. If the product result is a two-digit number then write down this product. If the product result is one-digit number, then add "2" in front of the product. For example of 67 with 3 time operations is: 67→42→28→16. What is the number of 39 after 100 time operation?

22. $21 \times 20 \times 19 \times \dots \times 3 \times 2 \times 1$ 的结果最多可以被几个 2 的连乘积整除？

How many of 2 continuous product can divide the product of $21 \times 20 \times 19 \times \dots \times 3 \times 2 \times 1$ without remainder?

23. 如图，平行四边形 ABCD 中，P 点为内部一点，已知 $\triangle PAB$ 的面积是 28 平方公分， $\triangle PCD$ 的面积占平行四边形 ABCD 的 $\frac{3}{14}$ ，则平行四边形 ABCD 的面积是多少平方公分？



As shown in figure, P is a point inside the parallelogram ABCD, the area of triangle PAB is 28 cm^2 , the triangle PCD is $\frac{3}{14}$ time of parallelogram ABCD. What is the area of parallelogram ABCD in unit cm^2 ?

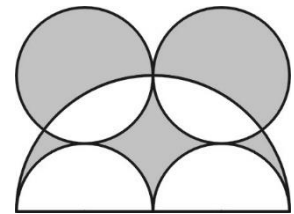
24. 龙龙有个心爱的闹钟，就算每小时会比标准时间慢半分钟，也舍不得丢掉。为了参加数学竞赛，必须要在隔天早上 7:15 起床准备，于是在晚上标准时间 9:20 时将闹钟对准睡觉。请问这闹钟在隔天早上标准时间的什么时刻会响？

Sam has an alarm clock, it is half minutes slower than standard time on every hour. In order to participate in the math competition, he must get up to prepare in the next morning 7:15. At standard time 9:20 pm, he align the alarm clock before sleep. When will the alarm clock ring on next morning?

25. 在 1, 2, 3, …, 40 这 40 个数中取出不同的两个数, 要使取出的两个数相加的结果是 4 的倍数, 总共有多少种取法?

Choose two different numbers from 1 to 40, the sum of these two numbers is a multiple of four. How many methods are there?

26. 三个半圆、两个小圆如图摆放, 两个小半圆和两个小圆的半径都是 10 公分, 则大半圆外的阴影面积比大半圆内的阴影面积多多少平方公分? (圆周率为 3.14)



As shown on the figure, there are 3 semicircles and 2 small circles, the radius of two small semicircles and 2 small circles are 10 cm. What is the different between the shaded area outside the large semicircle and the shaded area inside the large semicircle, in unit cm^2 ? ($\text{Pi} = 3.14$)

29. 阿笠博士给了基德，平次与新一每人一张数字卡 A、B 与 C，且只告诉它们 $A+B+C=21$ ：

基德说：「我不确定 B 与 C 的数字是多少，但我可以推定它们大小不同！」

平次听了后说：「不用你说，我早就看出 A、B、C 均不相等！」

新一听了后说：「喔！那我知道 A、B 与 C 是多少了！」

假设他们三个都没说谎且一样聪明，则新一拿到的数字卡是多少？

Dr. Agasa Hiroshi give Kuroba Kaito, Hattori Heiji and Shinichi Kudo each a number card A, B and C, then only tell them $A+B+C=21$:

Kuroba Kaito: "I'm not sure B and C are, but I can presumption that it's different."

After listen, Hattori Heiji: "Don't need you said, I already know A, B, are not equal!"

After listen, Shinichi Kudo: "Oh, then I know the value of A, B and C!"

Assume that all of them are not lie and as smart as it is, what is the number card Shinichi Kudo get?

30. 将下面 8 空格中填入 100 以内的质数，使得每行、每列与两条对角线的和都相等，则 A 是多少？

Use prime number below 100 fill in the 8 space on below, makes the sum of each row, each column and two diagonal are equal. What is A?

	I	
	A	

本试卷共有 12 页（包括本页）