



保良局

PO LEUNG KUK

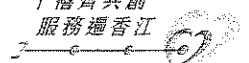
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Po Leung Kuk 5<sup>th</sup> Primary Mathematics World Contest  
Team Contest

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LH6 04/2000/24K

千禧齊共創  
服務遍香江





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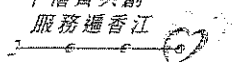
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1. A certain even number has exactly seven positive factors, including 1 and the number itself. What is this number?

Answer: \_\_\_\_\_





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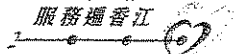
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## Po Leung Kuk 5<sup>th</sup> Primary Mathematics World Contest

### Team Contest

2. Each of three girls A, B and C has in her purse exactly one of the following objects, a pencil, a ball pen and an eraser. Out of the three statements below, one is true and two are false. Identify the true statement.
- (i) A has the pencil.
  - (ii) B does not have the pencil.
  - (iii) C does not have the eraser.

Answer: \_\_\_\_\_

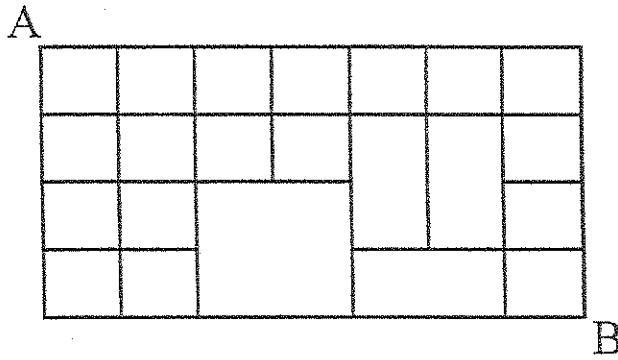




# Po Leung Kuk 5<sup>th</sup> Primary Mathematics World Contest

## Team Contest

3. A bug crawls from A to B along the grid shown. The bug may only move to the right or downward. How many different paths can the bug follow in going from A to B?



Answer: \_\_\_\_\_



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Team Contest

4. Given a two digit number, a sequence is formed by doubling the units digit, adding the tens digit and recording the result. The pattern is then applied to this number to obtain the third number and so on. (An example would be the sequence 59, 23, 8, 16, 13, ...). Find the 2001<sup>st</sup> term of the sequence if the 1<sup>st</sup> term is 14.

Answer: \_\_\_\_\_

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5. In the sequence of natural numbers 1, 2, 3, 4, 5, 6 ..., if a number cannot be expressed as the sum of two composite numbers, it will be eliminated. For example, 1 should be eliminated, 12 can be written as the sum of 4 and 8, so it shouldn't be eliminated. Putting the remaining natural numbers in ascending order, what is the 2001<sup>st</sup> number?

Answer: \_\_\_\_\_



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Team Contest

6. By using the digits 1,2,3,4,5,6,7,8,9 to fill in the following boxes  $\square\square\square\square\times\square\square\square\times\square$ , write down the expression that will produce the largest product. (Each digit is used only once.)

Answer:  $\square\square\square\square\times\square\square\square\times\square$

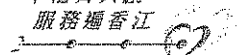


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## Team Contest

7. Five flowers are to be placed in a circle. The colours available are yellow, red and blue. In how many different ways can this be done so that no two flowers of the same colour are adjacent? (Note that  $\begin{matrix} B & R & Y \\ Y & B & R \end{matrix} = \begin{matrix} Y & B & R \\ R & Y & B \end{matrix}$ , rotation of arrangement is counted as one possibility)

Answer: \_\_\_\_\_



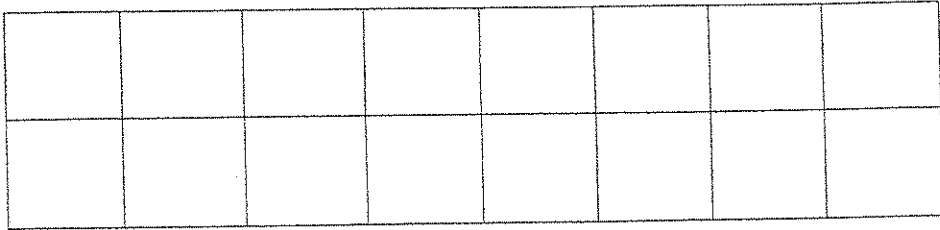




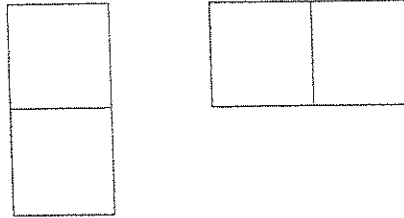
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Team Contest

8. We want to cover the following  $2 \times 8$  rectangle by using eight  $2 \times 1$  rectangles.



Each  $2 \times 1$  rectangle is placed horizontally or vertically.



How many arrangements are possible to cover the  $2 \times 8$  rectangle?

Answer: \_\_\_\_\_



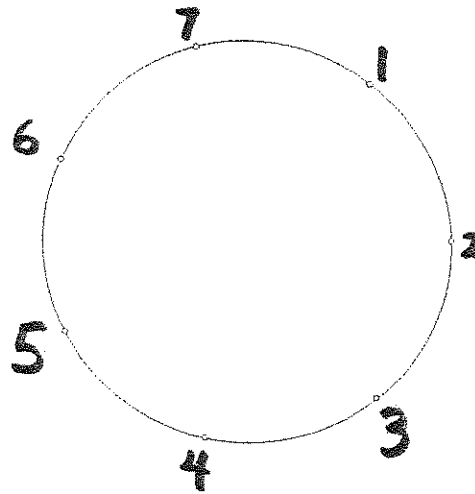
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Team Contest

9. Write the numbers 1, 2, 3, 4, 5, 6, 7 around a circle clockwise. Start by crossing out number 1 and crossing out every second uncrossed number until the last number remains. For example,

- cross out number 1, skip number 2,
- cross out number 3, skip number 4,
- cross out number 5, skip number 6,
- cross out number 7, skip number 2,
- cross out number 4, skip number 6,
- cross out number 2, so, the last number is 6.

If numbers 1 to 2001 are written on a circle clockwise and the same rule is applied, what is the last number?



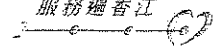
Answer: \_\_\_\_\_

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10. Three persons together own a pile of about 200 gold coins. They originally possess  $\frac{1}{2}$ ,  $\frac{1}{3}$ , and  $\frac{1}{6}$  of the coins, respectively. Now each person is going to take out some coins from the pile until there is nothing left. Then the first person is to return  $\frac{1}{2}$  of what he has taken out, the second person  $\frac{1}{3}$  of what he had taken, and third person  $\frac{1}{6}$  of what he had taken. If the returned coins are equally distributed to the three persons, then each person will get back the same number of coins which he originally possessed. How many gold coins were there originally?

Answer: \_\_\_\_\_



PO LEUNG KUK Mathematics Competition 2001

GROUP ITEMS

Questions	Answer	Remark
1	64	
2	iii	
3	101	
4	18	
5	2010	
6	$75321 \times 864 \times 9$	
7	6	
8	34	
9	1954	
10	282	