

欧拉计划

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书山有路勤为径，学海无涯苦作舟

本期内容

- 一. 什么是欧拉计划？
- 二. 如何使用欧拉计划？
- 三. 欧拉计划访问不了怎么办？

一. 什么是欧拉计划？

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About Project Euler

关于欧拉计划

What is Project Euler?

什么是欧拉计划？

Project Euler is a series of challenging mathematical/computer programming problems that will require more than just mathematical insights to solve. Although mathematics will help you arrive at elegant and efficient methods, the use of a computer and programming skills will be required to solve most problems.

欧拉计划是一系列有挑战性的数学与计算机编程题；要解开它们，需要的不止是数学知识：尽管数学能够帮助你找到一些优雅而有效的方法，大多数题目仍需要借助计算机和编程技巧来完成解答。

The motivation for starting Project Euler, and its continuation, is to provide a platform for the inquiring mind to delve into unfamiliar areas and learn new concepts in a fun and recreational context.

创立欧拉计划的初衷，以及不断维持其运行的动力，在于为好奇的头脑提供一个平台，使他们能够在有趣愉悦的氛围中，探索未知领域，学习新的知识。



一. 什么是欧拉计划？

Who are the problems aimed at?

这些题目的受众是谁？

The intended audience include students for whom the basic curriculum is not feeding their hunger to learn, adults whose background was not primarily mathematics but had an interest in things mathematical, and professionals who want to keep their problem solving and mathematics on the cutting edge.

欧拉计划预期的受众，包括在基础课程外学有余力的学生、非数学背景但对数学感兴趣的成年人以及希望磨练解题能力或是数学能力的专业人士。

Can anyone solve the problems?

所有人都能解开这些题目吗？

The problems range in difficulty and for many the experience is inductive chain learning. That is, by solving one problem it will expose you to a new concept that allows you to undertake a previously inaccessible problem. So the determined participant will slowly but surely work his/her way through every problem.

欧拉计划的题目难度不一，对于大多数人来说，解题就是一个逐渐学习的过程。也就是说，每当你解开一个题目，你将会了解一些新的知识，从而帮助你着手解决以前无从下手的题目。因此，任何有决心的参与者，即使进展再缓慢，也一定能逐一解开每一道题。

一. 什么是欧拉计划？

Project Euler.net

Logged in :
Mon, 26 Feb

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Problem Archives

The problems archives table shows problems 1 to 869. If you would like to tackle the 10 most recently published problems, go to **Recent** problems.

All (Solved / Unsolved / Pinned / Watched / Chronological) problems are being shown, sorted by the ID column in **Ascending** order.
Other language translation projects: **Project Euler Forum**.

View the details of Problems 1 to 50 on one page.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 Go to Problem:

ID	Title	Solved By	Difficulty			
1	Multiples of 3 or 5	990460	<div></div>	✓	  saudin 17 hours	221 posts
2	Even Fibonacci Numbers	790036	<div></div>	✓	  Normallyyy 1 hour	208 posts
3	Largest Prime Factor	569030	<div></div>	✓	  maweo 2 days	201 posts
4	Largest Palindrome Product	503562	<div></div>	✓	  euler090823 23 hours	201 posts
5	Smallest Multiple	506511	<div></div>	✓	  euler090823 11 hours	204 posts
6	Sum Square Difference	509765	<div></div>	✓	  euler090823 43 minutes	203 posts
7	10001st Prime	436340	<div></div>	✓	  NoFrieren 44 hours	197 posts

欧拉计划的官方网址：
<https://projecteuler.net>

二. 如何使用欧拉计划？

What next?

下一步做什么？

In order to track your progress it is necessary to setup an account and have Cookies enabled. If you already have an account then [Login](#), otherwise please [Register](#) – it's completely free!

为了记录你的解题进展，你需要注册一个账户，并保证你的浏览器启用Cookies。如果你已经拥有账户，请[登录](#)，否则请[注册](#)——这是完全免费的！

However, as the problems are challenging then you may wish to view the [Problems](#) before registering.

不过，由于题目具有挑战性，你也许应该先了解一下[题目](#)再开始注册。

”

"Project Euler exists to encourage, challenge, and develop the skills and enjoyment of anyone with an interest in the fascinating world of mathematics."

“欧拉计划的存在，是为了每个对数学感兴趣的人，鼓励他们，挑战他们，并最终培养他们的能力与乐趣。”

”

二. 如何使用欧拉计划？

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About Archives Recent News Register **Sign In**

Sign In

Username:

Password:

Confirmation Code:



Click image for new code

 Play audio for CAPTCHA

Remember Me: ☐

Sign In

注册官网账号

If you have forgotten your username and/or password and you have generated an emergency account recovery key, then you can use it to **recover your account**.

If you are experiencing a technical issue, then you can contact Project Euler by **email**.

NOTE: If you have forgotten your password, we are unable to help recover accounts if you have signed in at any time since 2014.

二. 如何使用欧拉计划？

开始做题

Problem Archives

The problems archives table shows problems 1 to 869. If you would like to tackle the 10 most recently published problems, go to **Recent** problems.

All (**Solved** / Unsolved / **Pinned** / **Watched** / **Chronological**) problems are being shown, sorted by the **ID** column in **Ascending** order. Other language translation projects: **Project Euler Forum**.

View the details of **Problems 101 to 150** on one page.

123456789101112131415161718

Go to Problem:

ID	Title	Solved By	Difficulty	
101	Optimum Polynomial	12449	<div></div>	
102	Triangle Containment	23365	<div></div>	
103	Special Subset Sums: Optimum	8723	<div></div>	
104	Pandigital Fibonacci Ends	17258	<div></div>	
105	Special Subset Sums: Testing	8694	<div></div>	
106	Special Subset Sums: Meta-testing	6939	<div></div>	
107	<div></div>	

二. 如何使用欧拉计划？

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Triangle Containment

Problem 102



Three distinct points are plotted at random on a Cartesian plane, for which $-1000 \leq x, y \leq 1000$, such that a triangle is formed.

Consider the following two triangles:

$A(-340, 495), B(-153, -910), C(835, -947)$

$X(-175, 41), Y(-421, -714), Z(574, -645)$

It can be verified that triangle ABC contains the origin, whereas triangle XYZ does not.

Using **triangles.txt** (right click and 'Save Link/Target As...'), a 27K text file containing the co-ordinates of one thousand "random" triangles, find the number of triangles for which the interior contains the origin.

NOTE: The first two examples in the file represent the triangles in the example given above.

Answer:

Check

1. 题目为英文题目
2. 需要直接提交答案

二. 如何使用欧拉计划？

答案错误



Sorry, but the answer you gave appears to be incorrect.


Go back to **Problem 102**.

答案正确



Congratulations, the answer you gave to problem 102 is correct.

You are the 23366th person to have solved this problem.

This problem has a difficulty rating of 15%. The highest difficulty rating you had previously solved was 5%.  This is a new record. Well done!

三. 欧拉计划访问不了怎么办？



别着急！我们还有国内镜像网站

<https://pe-cn.github.io/>

三. 欧拉计划访问不了怎么办？

#1275	最小公倍数「EP-5」 <small>编码能力提升</small>	无
#1276	平方和与平方之差「EP-6」 <small>编码能力提升</small>	无
#1277	第n个质数「EP-7」 <small>编码能力提升</small>	无
#1278	连续数字最大乘积「EP-8」 <small>编码能力提升</small>	无
#1279	整数英文表达的字母计数「EP-17」 <small>编码能力提升</small>	无
#1280	最长考拉兹序列「EP-14」 <small>编码能力提升</small>	无
#1281	平方数链「EP-92」 <small>编码能力提升</small>	无
#1282	质数求和「EP-10」 <small>编码能力提升</small>	无
#1283	圆周素数「EP-35」 <small>编码能力提升</small>	无
#1284	可截素数「EP-37」 <small>编码能力提升</small>	无
#1285	连续素数的和「EP-50」 <small>编码能力提升</small>	无
#1286	特殊毕达哥拉斯三元组「EP-9」 <small>编码能力提升</small>	无
#1287	方阵中的最大乘积「EP-11」 <small>编码能力提升</small>	无
#1288	各位数字的次幂「EP-30」 <small>编码能力提升</small>	无
#1289	全数字的乘积「EP-32」 <small>编码能力提升</small>	无
#1290	数字阶乘和「EP-34」 <small>编码能力提升</small>	无
#1291	双进制回文数「EP-36」 <small>编码能力提升</small>	无
#1292	钱珀瑙恩常数「EP-40」 <small>编码能力提升</small>	无

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