Remarkable prime numbers (curiosities)

Challenge no. 5 in eTwinning project 10 math challenges, 2020/2021

GABRIELA SVOBODOVÁ 13.10.20 15:59

SLOVAKIA (Monika)

ANONYMNÝ 22.01.21 12:19

sk.Julia

https://www.youtube.com/watch?v=FBbHzy7v2Kg

ANONYMNÝ 08.01.21 10:35

sk.nika

Prime numbers that are two spaces apart are called twin primes.
One of the first few twin prime pairs are: (3, 5), (5, 7), (11, 13), (17, 19), (29, 31), (41, 43), (59, 61), (71, 73), (101, 103), (107, 109), (137, 139).

ANONYMNÝ 18.12.20 11:08

sk.helenka

2 is considered a prime number because it is only divisible by 2 (itself) and 1. All other even numbers are divisible by 2, which makes 2 the only even prime number. 2 is also the smallest prime number.

ANONYMNÝ 18.12.20 10:57

sk.Samuel

Eratosthenes created an algorithm that calculated prime numbers, known as the Sieve of Eratostheneshis, this algorithm is one of the earliest algorithms ever written

good — ABIDINMORBELDERBENT

ANONYMNÝ 18.12.20 10:50

sk.Marianka

The smallest prime number is the number 2.A prime number is a natural number.The largest prime number of all time consists of 23,249,425 digits

In another word, a prime number is a natural number p >1 which cannot be expressed as the product of two smaller natural numbers.

We have also a beautiful prime number, Belphegor's Prime

1000000000000066600000000000001=$10^{30} + 666 + 10^{14} + 1$

thanks — TUGBACAMDEREDERBENT

ANONYMNÝ 18.12.20 10:48

sk. Daniela

A prime number is a natural number greater than 1 that has no positive divisors except 1 and itself. According to Euclid's theorem, there are an infinite number of prime numbers. Subsets of prime numbers can be generated using different formulas for prime numbers. The first 1,000 primes are listed below, followed by lists of significant types of primes in alphabetical order, listing their respective first terms. 1 is neither primary nor composite.

very nice — TUGBACAMDEREDERBENT

ANONYMNÝ 17.12.20 20:03

skSaška

The largest prime number currently known is 282,589,933-1. It was discovered in December 7, 2018 by a supercomputer volunteered by Patrick Laroche. The number is known as M82589933. To get this value, the computer added together 82,589,933 twos, then subtracting one.

very nice — MEHMETURAM38

ANONYMNÝ 17.12.20 19:04

sk.Renatka

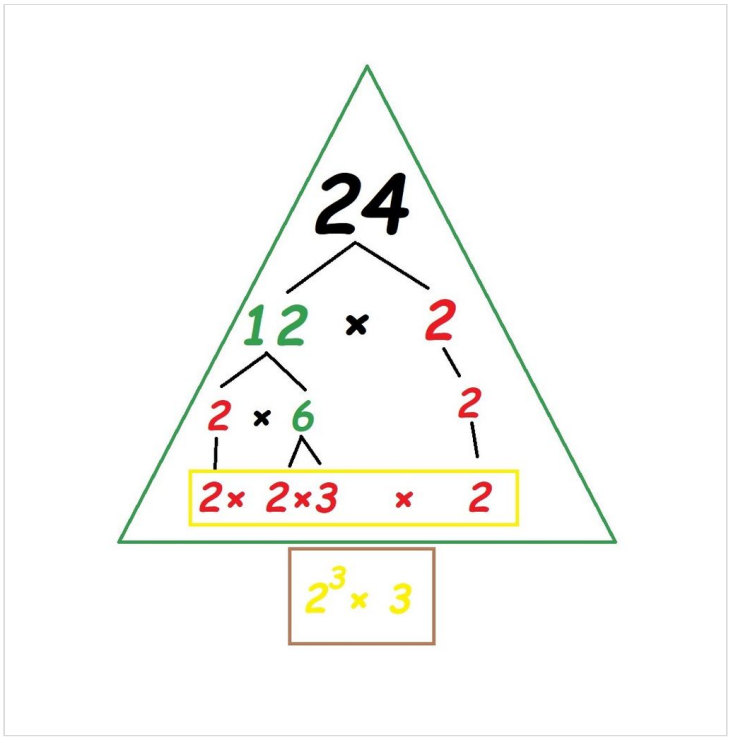
There are an infinite number of prime numbers. The largest prime number of all time consists of 23,249,425 digits and its "discoverer" is Jonathan Pace. Modern technology helped him calculate this number. It took his computer a record 6 days.

wonderfull — UGUR CESUR

ANONYMNÝ 15.12.20 14:59

skMaruska

We use a tree diagram or factor tree to find the prime factors



Super :) — MONIKA POĽANSKÁ

good — TUGBACAMDEREDERBENT

ANONYMNÝ 14.12.20 13:12

sk.Vanesa

The smallest prime number is the number 2 and the largest known prime number is a Mersenne prime with 24,862,048 decimal digits. There are infinitely many primes. No known simple formula separates prime numbers from composite numbers.

ANONYMNÝ 14.12.20 11:50

sk.viktoria

The largest known prime number is a Mersenne prime with 24,862,048 decimal digits. There are infinitely many primes, as demonstrated by Euclid around 300 BC. No known simple formula separates prime numbers from composite numbers. However, the distribution of primes within the natural numbers in the large can be statistically modelled.

ANONYMNÝ 11.12.20 10:35

sk.alex

The largest prime number of all time

The new discovery was taken care of by the organization Mersenne Prime Search, which is association of searchers for Mersenne prime numbers. The prime number was named M77232917. And it has 23, 249,425 digits. Its discoverer is the American engineer Jonathan Pace. In six days of non-stop calculation work, discoverer will receive 2487 euros.

MONIKA POĽANSKÁ 01.12.20 17:36

Monika/Slovakia

Prime TWINS - these are primes whose difference is 2. There are 15 twins between the numbers 1 and 200.

Beautiful numbers :) — GABRIELA SVOBODOVÁ

CZECHIA (Gabi)

ANONYMNÝ 14.12.20 12:14

David CZ

Pierre Fermat assumed that all numbers in the form Fm = 2k + 1, where k = 2m, m = 0, 1, 2, ... are prime numbers. The first five members of this sequence are 3, 5, 17, 257, and 65,537 primes. However, as early as 1732, Leonhard Euler discovered that the sixth number 4,294,967,297 is compound because it is divisible by 641. These numbers are called Fermat numbers. At present, the number of Fermat primes is still an open problem, it is assumed that apart from the first five there are no more primes.

IMELDA IBENDJI 14.12.20 00:23

We know that 2 is the only even prime number. And only two consecutive natural numbers which are prime are 2 and 3. Apart from those, every prime number can be written in the form of 6n + 1 or 6n – 1 (except the multiples of prime numbers, i.e. 2, 3, 5, 7, 11), where n is a natural number. For example: 6 (1) – 1 = 5.

nice — MEHMETURAM38

VOJTĚCH KARTAŠ 13.12.20 22:46

cz Vojta

The largest prime number found so far has 24,862,048 digits.

GRIGORIY RYBALKO 13.12.20 22:42

Grigoriy/CZ
Prime numbers were first studied extensively by the ancient Greek mathematicians.

ANONYMNÝ 13.12.20 19:35

Stepanka/CZ

Euclid In his book (Book 9, Proposition 20), proved that there are infinitely many prime numbers. He formulated the sentence as "prime numbers are more than any number of prime numbers"

good — HALILKAYALAR38

ANONYMNÝ 13.12.20 18:25

cz Roman

Number two is the only even prime number.

ANONYMNÝ 13.12.20 14:30

Kacka/CZ

Prime numbers were among the first mathematical objects discovered and described by ancient Ancient mathematicians. They were also studied by the famous Greek mathematician Euclid, some three centuries BC.

ANONYMNÝ 13.12.20 14:32

Tana/CZ

A prime number is a natural number that is not completely divisible by a natural number other than one and itself. The only prime number that is even is 2.

JAKUB LELOVIČ 11.12.20 13:50

Jakub/CZ

The only even prime number is number 2.

PATRIK HAVLÍK 14.12.20 08:24

Patrik/CZ

No prime number greater than 5 ends in a 5. Any number greater than 5 that ends in a 5 can be divided by 5.

ANONYMNÝ 11.12.20 13:55

Misa/CZ

A prime number is a natural number. They are divisible by one and by themselves. There are infinitely many prime numbers. The prime numbers also include other forms - Fermat numbers and Merssen numbers.

4 000

	000	100	200	300	400	500	600	700
00	37 813	38 921	39 971	41 081	42 073	43 051	44 201	45 307
01	37 831	38 923	39 979	41 113	42 083	43 063	44 203	45 317
02	37 847	38 933	[illegible]	41 117	42 089	43 067	44 207	45 319
03	37 853	38 953	39 989	41 131	42 101	43 093	44 221	45 329
04	37 861	38 959	[illegible]	41 141	42 131	43 103	44 249	45 337
05	37 871	38 971	40 013	41 143	42 139	43 117	44 257	45 341
06	37 879	38 977	40 031	41 149	42 157	43 133	44 263	45 343
07	37 889	38 993	40 037	41 161	42 169	43 151	44 267	45 361
08	37 897	39 019	40 039	41 177	42 179	43 159	44 269	45 377
09	37 907	39 023	40 063	41 179	42 181	43 177	44 273	45 389
10	37 951	39 041	40 087	41 183	42 187	43 189	44 279	45 403
11	37 957	39 043	40 093	41 189	42 193	43 201	44 281	45 413
12	37 963	39 047	40 099	41 201	42 197	43 207	44 293	45 427
13	37 967	39 079	40 111	41 203	42 209	43 223	44 351	45 433
14	37 987	39 089	40 123	41 213	42 221	43 237	44 357	45 439
15	37 991	39 097	40 127	41 221	42 223	43 261	44 371	45 481
16	37 993	39 103	40 129	41 227	42 227	43 271	44 381	45 491
17	37 997	39 107	40 151	41 231	42 239	43 283	44 383	45 497
18	38 011	39 113	40 153	41 233	42 257	43 291	44 389	45 503
19	38 039	39 119	40 163	41 243	42 281	43 313	44 417	45 523

ANONYMNÝ 11.12.20 13:39

Michaela/CZ

Prime numbers are infinitely many. Each natural number can be decomposed into one prime product. Therefore, one is not considered a prime number. The first prime is the number 2, which is the only even prime.

ANONYMNÝ 11.12.20 13:33

Julca/CZ

Prime numbers are all natural numbers that have exactly two different divisors, the number one and itself. The opposite is a compound number that has at least three different divisors. This division of numbers was introduced by Pythagoras. We do not consider number one to be a prime number or a compound number. For example, the number 40 is not a prime number because it is divisible by 1, 2, 4, 5, 8, 10, 20, and 40.

ANONYMNÝ 11.12.20 13:29

Amálka/CZ

Prime number is a natural number greater than 1 that is not a product of two smaller natural numbers.
A natural number greater than 1 that is not prime is called a composite number.
or example, 5 is prime because the only ways of writing it as a product, 1 × 5 or 5 × 1, involve 5 itself.

ANONYMNÝ 10.12.20 13:27

Kristyna/CZ

The largest known prime number so far is Mersen's prime number, it is called M43112609, where the subscript determines the exponent z. It is thus the prime number 243112609–1. It was found on August 23, 2008 and has 12, 978, 189 digits.

GABRIELA SVOBODOVÁ 22.11.20 16:28

Gabi/Czech Republic

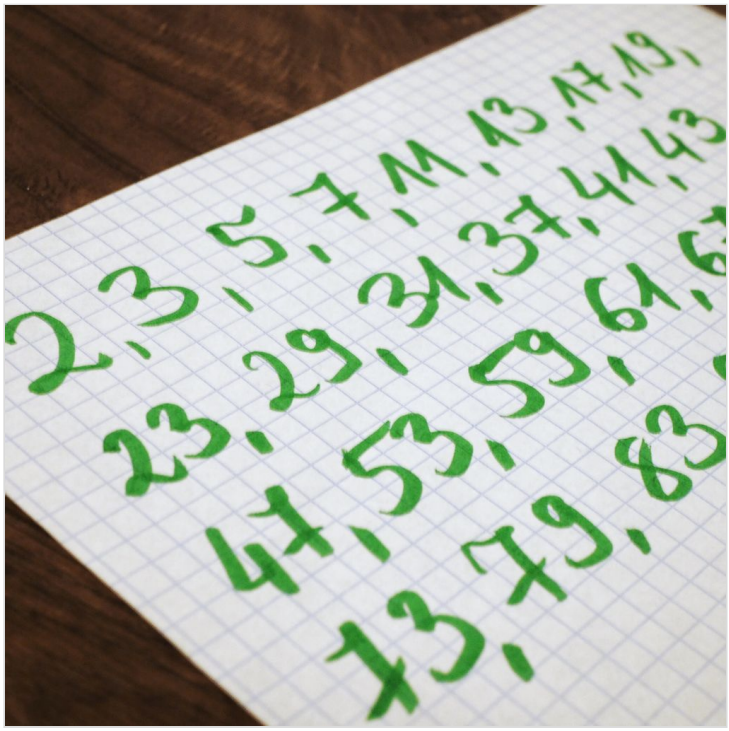
YOUNG SHELDON also welcomed the others this way: „Welcome! Today, I'd like to talk about prime numbers and why they bring us joy. ("Demons, Sunday School, and Prime Numbers" s01e11)“ I hope you are also so happy ☺!

POLAND (Agnieszka)

AGNIESZKA 16.12.20 23:59

простое число

In Polish, in English, we name prime numbers as if they were at the beginning. This can be confusing for students who are constantly trying to make one into a prime ;-)
In Russian, we call prime numbers простое число, which means straight numbers, which perhaps better reflects the essence of these numbers. How is it in your languages? What do you think about it?



In Czech it is the same like in Polish or in English. I think it is very interesting idea. — **GABRIELA SVOBODOVÁ**

In Slovak it is the same :) — **MONIKA POĽANSKÁ**

We call it the " Asal Sayı" in Turkish. Asal means: main, basic, essential.Similar to other languages:) — **NBILGIÇLI**

ANONYMNÝ 15.12.20 00:59

Interesting Facts About Numbers & Prime Numbers

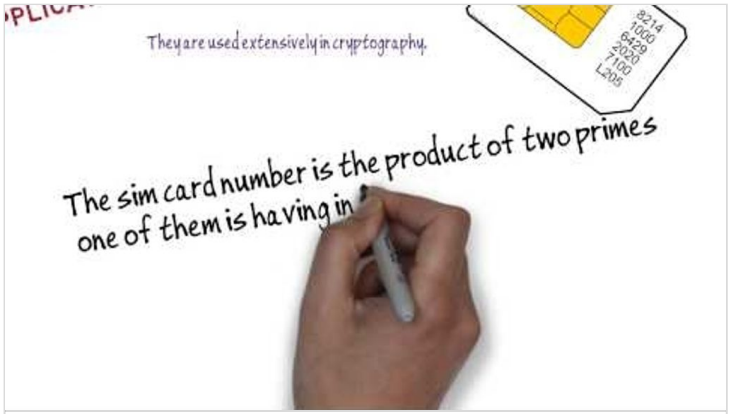
Interesting Facts About Numbers & Prime Numbers
od používateľa Facts Net
YOUTUBE

Very interesting informations. I never realized I couldn't write zero in Roman numerals — **MONIKA POĽANSKÁ**

AGNIESZKA 14.12.20 21:38

Prime Numbers

I like this video, I can't do that :-(



Prime Numbers (some facts).
od používateľa INNo MATHs
YOUTUBE

Me too :) — **MONIKA POĽANSKÁ**

TURKEY (Nevin)

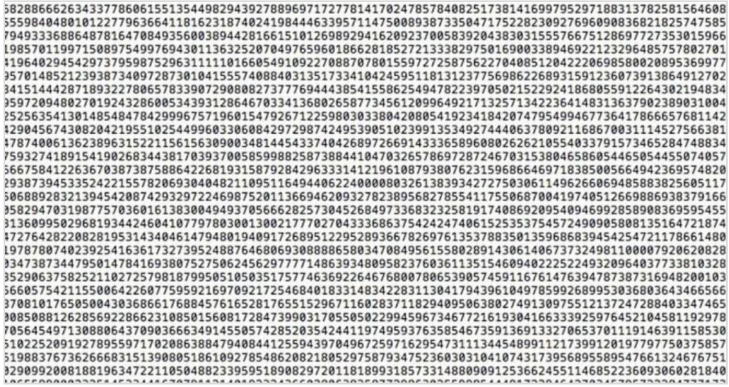
ANONYMNÝ 08.12.20 22:13

Beren C./TURKEY

Especially banking transactions and internet shopping etc. In the fields, **prime numbers** are used so that passwords cannot be cracked.**Because** it is very difficult to factor the product of ***two very large prime numbers*** into their prime factors,which makes it difficult to crack passwords.

ANONYMNÝ 08.12.20 21:55

Gül A./ TURKEY
It found at 2018 by Patrich Laroche who iş the member of GIMPS (Great ınternet Merseme Prime Search)Volunter Parich Parichthe found the Lorgest prime number in less than four using GIMPS software and earnet $3,000



ANONYMNÝ 08.12.20 16:13

Rabia A./TURKEY

The first sign of the use of prime numbers is the Rhind Mathematical Papyrus from.1500 BC

ANONYMNÝ 10.12.20 13:08

Kerem B./ Turkey

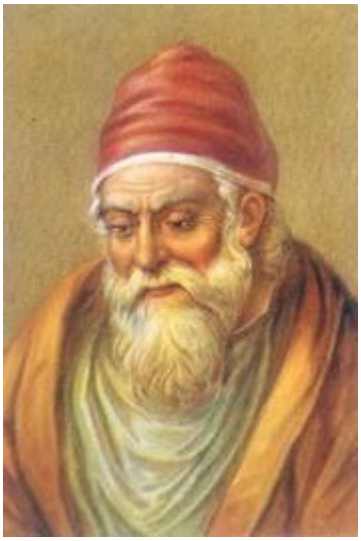
There are theorems about prime numbers that have not been proven to be true or false for centruies. For example; the Riemann hypotheses (1856) regarding the distrubution of prime numbers on which a prize of 1 million dollars was placed.

$$\zeta(s) = \left(1 - 2^{1-s}\right)^{-1} \sum_{n=1}^{\infty} \frac{(-1)^n}{n^s}.$$

ANONYMNÝ 06.12.20 19:32

Efe Ç./Turkey

Euclid was the first to realize that prime numbers are infinite. According to Euclid, if we take a list with a finite number of prime numbers, we can show that there is another prime number that is not necessarily on this list.



I think that Euclid was the most important personality of mathematics, especially geometry. — GABRIELA SVOBODOVÁ

I think so too. He's definitely a person far ahead of his time — CAKILTEPEEFE

interesting — TUGBACAMDEREDERBENT

LISEKKALE 03.12.20 22:16

Nevin/Turkey

Did you know that it's a very useful, fun and simple method to find prime numbers between any two numbers? You can see this method called "Eratosthenes Sieve" in the video.

Prime Numbers - Sieve of Eratosthenes
od používateľa Region 10 ESC
YOUTUBE

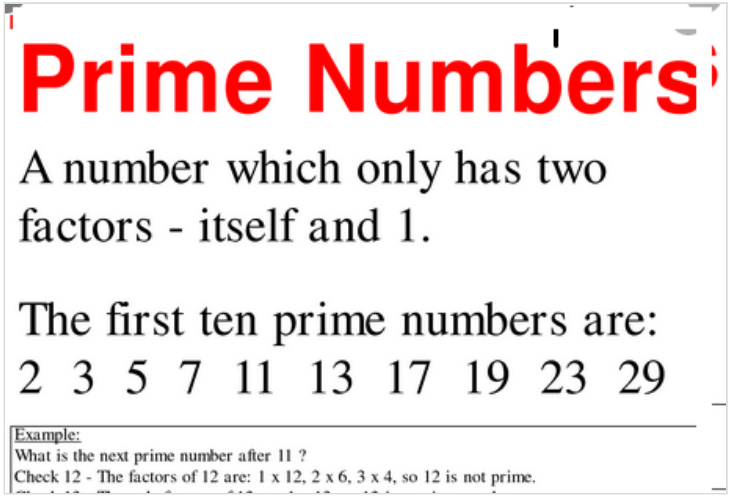
I like this method :) — GABRIELA SVOBODOVÁ

lovely video, thank you Nevin — MONIKA POĽANSKÁ

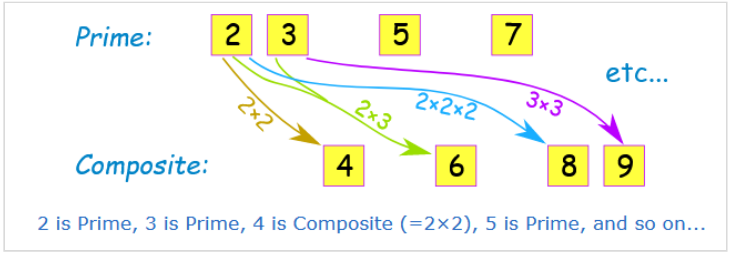
TURKEY (Berna)

ANONYMNÝ 19.12.20 19:48

PRİME NUMBERS



ANONYMNÝ 19.12.20 19:42



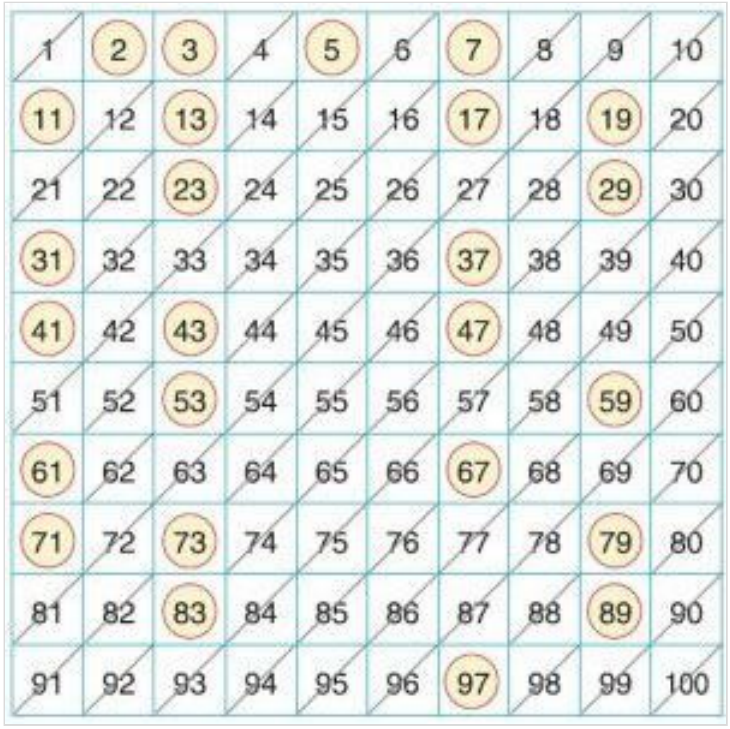
interesting — **ABIDINMORBELDERBENT**

ANONYMNÝ 19.12.20 08:24

Mehmet Refik Güven Ünye Science High School/ Çağla.p

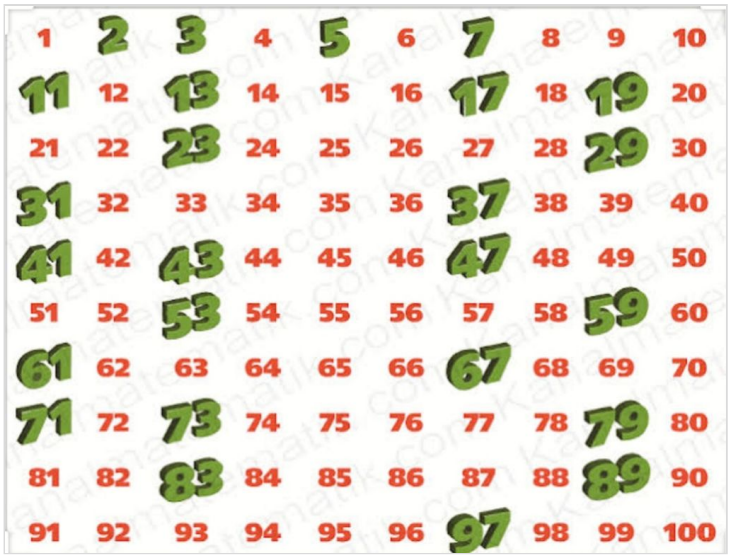
Prime numbers are just natural numbers with two positive integer divisors. They are positive integers greater than 1 that can only be divided by itself and by the number 1. The smallest prime number is 2. It has been known since Euclid that prime numbers are infinite.
-Erotesten Sieve
The table is used to find prime numbers up to n. The number n should not be too large. The method is extremely simple. Now let's try to draw the chart by taking n i 110.

a) First, all natural numbers from 0 to 110 are written, 0 and 1 is not prime.
b) The first prime number is 2. Its multiples are drawn because they are not prime since they are divided by two and one. Note that the first number drawn is 22 = 4.
c) Then comes 3, which is the first number not drawn. 3 is prime. It is drawn in multiples of it. The first draw is 32 = 9.
d) Continue in this way. It cannot be continued after 72 = 49damn because 112 = 121 is not in the table. Thus, prime numbers from 1 to 110 appear as those that are not drawn



MELISA NUR YOZLU 03.01.21 18:01

HERE ARE THE PRİME NUMBERS



TURKEY (Evrim)

ANONYMNÝ 04.01.21 22:37

Prime Number

ÇAĞLA ARSLAN 03.01.21 17:16

ANONYMNÝ 02.01.21 09:06

FEYZA350 02.01.21 08:40

Number two is the only even prime Number

HÜSEYIN A. / TURKEY 12.12.20 14:07

Prime numbers are just natural numbers with two positive integer divisors. They are positive integers greater than 1 that can only be divided by itself and by the number 1. It is denoted by {\ displaystyle \ mathbb {P}} {\ displaystyle \ mathbb {P}}. The smallest prime number is 2. It has been known that prime numbers are infinite since Euclid. Many questions about prime numbers still cannot be answered today. Many theorems on prime numbers have been put forward and proven for centuries. Various formulas have been produced to find prime numbers, but none of them have come to a conclusion. The most important occupation of the primitive number theory is such questions about prime numbers. Prime numbers are also the building blocks in the field of cryptography

Asal Sayı
Dokument PDF
PADLET DRIVE

very nice — TUGBACAMDEREDERBENT

TURKEY (Ugur)

TUGBACAMDEREDERBENT 25.12.20 21:28

The number is currently neither prime nor compound, and it has a special case. Many studies based on the acceptance of 1 as prime are still valid: such as the work of Stern and Zeisel. Henri Lebesgue is known as the last professional mathematician to prime 1 in his work. When 1 is considered as prime, some theorems need to be changed. For example, the fundamental theorem of arithmetic, which says that all positive integers can "only" be written as products of prime numbers, does not apply to the previous definition of prime numbers.

very nice tugba — MEHMETURAM38

MUSTAFABALCIDERBENT 15.12.20 21:36

$5a+4$ ile $4b-1$ aralarında asal ve

$$\frac{3a+4}{4b+3}=\frac{2}{5}$$

olduğuna göre, $5a+4b$ toplamı kaçtır?

A) 6 B) 5 C) 4 D) 3 E) 2

Prime numbers between 5a + 4 and 4b-1 — MUSTAFABALCIDERBENT

hard :(— MEHMETURAM38

so much fun — HALILKAYALAR38

i solved — EVRIMYELDA

MUSTAFABALCIDERBENT 16.12.20 22:30

x ve y asal sayılardır.

$x.y=69$ olduğuna göre $x+y$ kaçtır?

A) 9 B) 10 C) 14 D) 20 E) 26

x and y prime numbers — MUSTAFABALCIDERBENT

23,3 — TUGBACAMDEREDERBENT

26 — MEHMETURAM38

MUSTAFABALCIDERBENT 16.12.20 22:30

0 ile 24 arasında kaç tane asal sayı vardır?

A) 7 B) 8 C) 9 D) 10

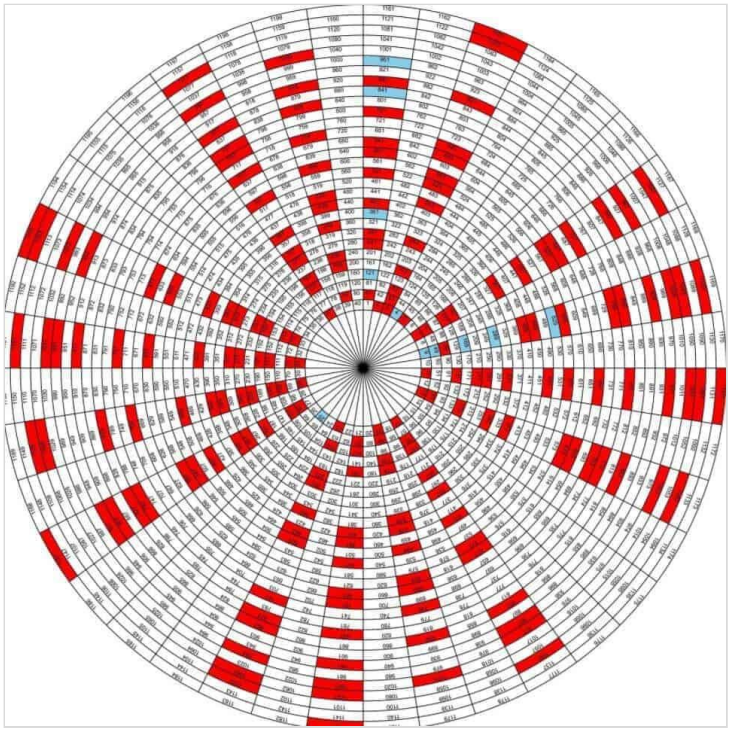
Too bad we don't understand :(. can you translate it into english?
— MONIKA POĽANSKÁ

I'm sorry for writing in Turkish. How many prime numbers are there between 0 and 24? — MUSTAFABALCIDERBENT

Thank you for translation :) — MONIKA POĽANSKÁ

thank you — MEHMETURAM38

easy questiob — ABIDINMORBELDERBENT



good — TUGBACAMDEREDERBENT

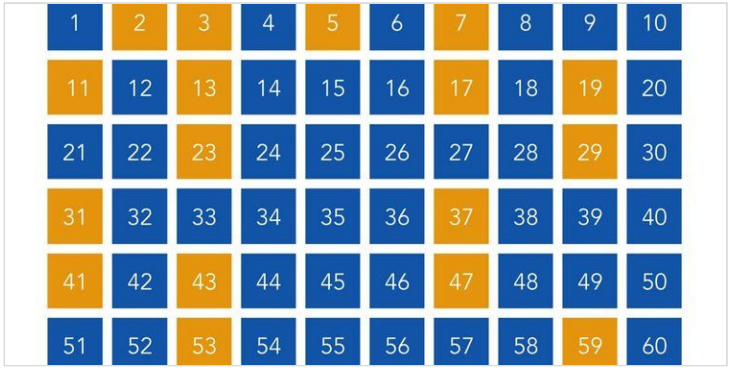
so much fun — HALILKAYALAR38

ABIDINMORBELDERBENT 15.12.20 21:20

The theorem that expresses this fact mathematically is known as the "fundamental theorem of arithmetic". Accordingly, any integer greater than I can be expressed as a product of prime numbers only in one way.For example: It is written as 93 = 3 × 31 and there is no other software except that the 3 and 31 are replaced by the product of 93 prime.Thus, each integer is either itself prime or can be written as a product of prime. So if we knew all the prime we would have known all the numbers!

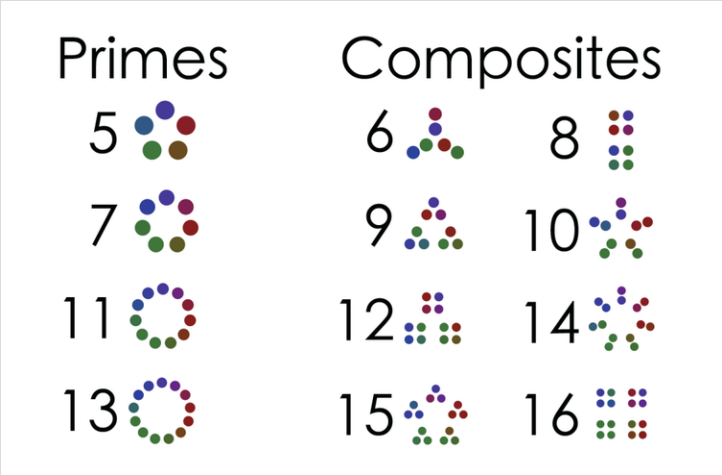
HALILKAYALAR38 15.12.20 21:18

In the picture above we see the distribution of prime numbers on the right, and the illustration on the left shows the distribution in the energy levels of the nuclei of heavy atoms. These two distributions namely; The order in the distribution of prime numbers and the distribution of energy levels of a heavy atom Uranium atom are exactly the same.



MEHMETURAM38 15.12.20 21:17

German mathematician Riemann says in 1859 that if we cannot find an order for prime numbers, so if we take any number, let's try to find out how many prime numbers smaller than this number... The formula he put forward is probably correct but has not been proven so far; gives prime numbers as solutions of Zeta function. He claims that all solutions of the function called zeta function are above the ½ line on the real axis as shown in the graph below.



Very interesting. – GABRIELA SVOBODOVÁ

MUSTAFABALCIDERBENT 15.12.20 21:15

one question

Aşağıdaki sayılardan hangisi asal değildir?

A) 61 B) 71 C) 91 D) 101 E) 131

Which of the following numbers is not a prime number?
– MUSTAFABALCIDERBENT

good job – MEHMETURAM38

UGUR CESUR 15.12.20 21:11

Prime numbers are defined as positive integers greater than 1 that can only be divided by itself and the number 1. Prime numbers have no divisors other than 1 and itself. For example; The number 5 is not divided into 3 or 2. It can only be divided into 1 and itself, so 5 are prime. The prime numbers from 1 to 100 are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89 and 97 '.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

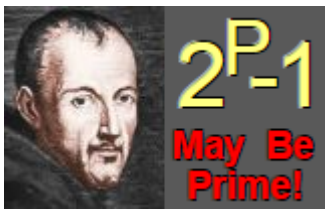
very nice – MEHMETURAM38

BOSNIA AND HERZEGOVINA (Lejla)

AMINA DZIHANIC 08.12.20 13:19

Amina/ Bosnia and Herzegovina

The **largest known prime number** (as of November 2020) is $2^{82,589,933} - 1$, a number which has 24,862,048 digits when written in base 10. It was found via a computer volunteered by Patrick Laroche of the Great Internet Mersenne Prime Search (GIMPS) in 2018.



May be:) – ETWINNING PROJECT

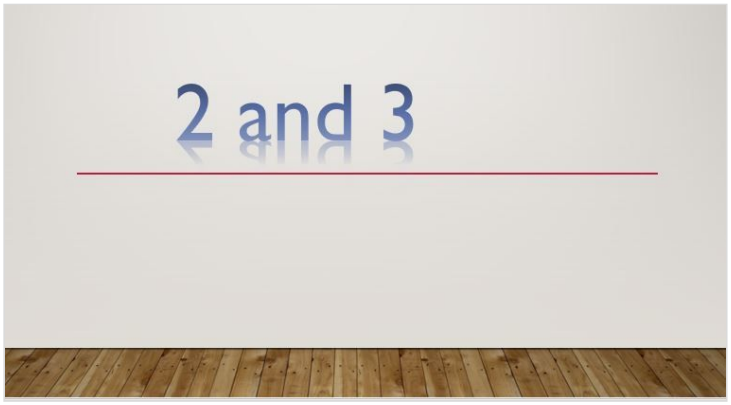
good – TUGBACAMDEREDERBENT

thank you – MEHMETURAM38

PORTUGAL (Ana)

ACCFRANCISCO76 28.12.20 18:35

The number 2 is the only number that is even. The first odd prime number is 3.



TURKEY (Elif)

TURKEY (Özlem)

BOSNIA AND HERZEGOVINA (Nada)

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