

This article was published in Central Asian Scientific Journal No.1(29) Volume 1 in 2026 in Russian.

This article has been translated into English by its author Shchemelinin K. S.

The original article in Russian can be read at:

<http://www.schemelinin.com/KS-intellectual-potential-2026.pdf>

<https://www.elibrary.ru/item.asp?id=88898348>

**Konstantin Sergeyevich Shchemelinin (rus: Константин Сергеевич Щемелинин)**  
**ORCID:0000-0002-3636-1583**

## INTELLECTUAL POTENTIAL AND ITS USE

**Abstract.** The concept of intellectual potential is introduced as the number of people with an IQ above 130 in the study group of people.

The intellectual potential of humanity has been calculated at certain points in time during the last 130 thousand years.

It is determined that the enormous successes of people in the field of science, technology and art over the previous 130 thousand years are the result of the growth of the intellectual potential of humanity by tens of thousands of times.

The top-126 countries of the world in terms of the percentage of people with an IQ over 130 and the top-126 countries of the world in terms of intellectual potential for 2024 are calculated.

The concept of using intellectual potential in various fields of activity is introduced.

The top-120 countries for the use of intellectual potential in science, the top-98 countries for the use of intellectual potential in technology, the top-111 countries for the use of intellectual potential in music and the top-102 countries for the use of intellectual potential in cinematography in 2024 are calculated, and the use of intellectual potential in book publishing in 2022-2024 is analyzed: the top-68 countries in terms of books deposited in depositories and the top-35 countries in terms of the number of published titles are calculated.

The use of the intellectual potential of humanity in technology from 2015 to 2024 is calculated, as well as the use of the intellectual potential of humanity in cinematography from 2000 to 2023.

**Keywords:** intelligence, intellectual potential, regional development, scientific research, musical art, patents, book publishing, cinematography

### *Table of Contents*

*§1. Limited IQ*

*§2. Intellectual potential*

*§3. The intellectual potential of humanity*

*§4. Certain types of intellectual potential*

*§5. Analysis of the function of intellectual potential*

*§6. Top-126 countries of the world in terms of the percentage of people with IQ over 130 in 2024*

*§7. Top-126 countries of the world in terms of intellectual potential in 2024*

*§8. Use of intellectual potential*

*§9. Analysis of the function of using intellectual potential*

*§10. Top-120 countries for the use of intellectual potential in science in 2024*

*§11. Top-98 countries for the use of intellectual potential in technology in 2024*

*§12. Top-111 countries for using intellectual potential in music in 2024*

*§13. Top-102 countries for the use of intellectual potential in cinematography in 2024*

*§14. Using intellectual potential in book publishing in 2022-2024: top 68 countries in terms of books deposited in depositories and top 35 countries in terms of the number of books published*

*§15. Using the intellectual potential of humanity in technology from 2015 to 2024*

*§16. Using the intellectual potential of humanity in cinematography from 2000 to 2023*

### ***§1. Limited IQ***

How a person reveals his intellectual abilities, which are indicated by the size of his IQ, depends not only on the moral and volitional qualities of the individual himself, but also on the career and money-making options that society provides him with: for example, poor prospects for earning money by writing books will not allow many to reveal their talent from potential writers.

The IQ intelligence coefficient characterizes a person's capabilities in the mental sphere, and not in the entire sphere, namely in the field of creating intellectual work.

IQ does not characterize people's mental abilities in any way, such as scheming and lying plausibly.

In addition, the IQ coefficient does not take into account a person's hard work, as well as his ability to withstand difficulties.

In general, as can be seen, the IQ coefficient cannot be an accurate marker of an individual's future life and intellectual success.

### ***§2. Intellectual potential***

The IQ coefficient shows the size of a person's abilities for certain types of intellectual work. Modern IQ tests are designed so that the average IQ of the largest possible group of people would be 100.

Having abilities does not guarantee a result: for example, 10 randomly selected people with an IQ of 90 may well write more books than 10 randomly selected people with an IQ of 140; however, a randomly selected group of one million people with an IQ of 90 will certainly write many times fewer books than a randomly selected group. a group of one million people with an IQ of 140.

The intellectual potential of a large group of people should be understood as their intellectual capabilities, therefore, to search for intellectual potential, it is necessary to consider a large group of people with a certain increased IQ.

In principle, any IQ value from 110 to 140 (150) can be used for the calculation base, however, many scales that convert numerical IQ values into qualitative indicators define people with an IQ above 130 as individuals with an extremely high level of intelligence quotient or intellectually gifted individuals, therefore, within the framework of this study, to determine the foundations (bases, fundamentals) of intellectual potential, an IQ equal to 130 is chosen, since people with an IQ greater than 130 can confidently say that many types of their intellectual abilities are certainly higher, than the same types of intellectual abilities in ordinary people with an IQ from 90 to 110.

Thus, **intellectual potential is the number of people with an IQ above 130 in the study group of people at a given time.**

IQ follows a normal distribution, so  $Z = (IQ - \mu) / \sigma$ , where:

IQ = 130 units.

$\mu$  is the average IQ of the country's residents.

Standard deviation  $\sigma = 15$ .

### §3. The intellectual potential of humanity

**Definition No.1.** The intellectual potential of humanity is the number of all people with an IQ greater than 130 at a given time.

The intellectual potential of humanity is designated IPH, as it is formed from the words "intelligence" (rus) and "intelligence" (Eng), "potential" (Rus) and "potential" (Eng), as well as the words "humanity" ("humanity" in English) and the expression Homo sapiens ("man reasonable" in Latin).

IPH stands for the number of all human beings with an IQ greater than 130.

The dimension of intellectual potential:

In Russian: [IPH] = [million people]

In English: [IPH] = [mln people]

Intellectual potential describes the whole of humanity as a whole, so it can be used to compare humanity at different time intervals.

With an average IQ of 100 for all humanity,  $f(Z)=0.97725$ , therefore, the number of people with an IQ above 130 is 2.275% of the world's population, therefore, the intellectual potential of humanity on November 12, 2025 and the world's population of about 8256 million people [10] is equal to  $IPH = 187.8$  million people.

Table 1. The size of the intellectual potential of humanity (Homo sapiens) from the beginning of time to the present

No.	Date	Humanity population, million people	The size of the intellectual potential of humanity IPH , million people
1	130000 BC	0,12-0,325 [7]	0,00273-0,00739
2	10000 BC	4 [1, p. 57]	0,09
3	5000 BC	5 [1, p. 79]	0,11
4	2000 BC	27 [1, p. 116]	0,61
5	500 BC	100 [1, p. 243]	2,28
6	200 год	190 [11]	4,32
7	700 год	210 [11]	4,78
8	1000 год	275 [11]	6,25
9	1200 год	360 [11]	8,20
10	1400 год	350 [11]	7,96
11	1500 год	450 [11]	10,2
12	1700 год	610 [11]	13,9
13	1900 год	1600 [11]	36,4
14	1927 год	2000 [11]	45,5
15	1960 год	3015 [11]	68,6
16	1975 год	4071 [11]	92,6
17	1987 год	5050 [11]	114,9
18	1998 год	6007 [11]	136,7
19	2010 год	7022 [11]	159,8
20	2022 год	8021 [11]	182,5
21	2025 год	8256 [10]	187,8

### **Limitation for Table 1.**

In modern times, the average IQ of humanity is 100, but this does not mean that people who lived 5-10 thousand years ago or more would have had the same IQ if they had been tested using today's tests – this is due to the fact that the human brain began to gradually decrease in size about 12,000-10,000 years ago [6, p. 02]. This trend intensified 3,000 years ago [6, p. 06], as a result of which the brain of modern humans is now about 10.7% smaller than the brain of people who lived 300-10 thousand years ago [6, p. 03]. But intelligence and IQ size depend not only on the volume of the brain, but also on its structure, so it is not known what the results of a modern IQ test conducted in people of the past might have been – maybe they were higher, maybe the same, or maybe lower than in people at the beginning of the XXI century. centuries. It is currently impossible to answer this question, so Table 1 is calculated on the assumption that the average IQ of humanity, determined by modern tests, is 100 at all times.

**Conclusion No.1 from Table 1.** Over the past 130 thousand years, the intellectual potential of humanity has grown by about 25,000-70000 times.

**Conclusion No.2 from Table 1.** Over the past 12,000 years, the intellectual potential of humanity has grown by  $187.8/0.09 = 2087 \approx 2100$  times.

**Conclusion No.3 from Table 1.** One year of modern scientific, technological and cultural development of humanity corresponds to 2000 years of development of people who lived 12,000 years ago.

**Conclusion No.4 from Table 1.** One year of modern scientific, technological and cultural development of humanity corresponds to 30 years of human development 1000 years ago.

**Conclusion No.5 from Table 1.** The higher the number of humanity, the higher the size of our intellectual potential, and therefore the higher the opportunities in the field of science, technology and art.

**Conclusion No.6 from Table 1.** The colossal scientific, technological and cultural successes of humanity in recent years and decades, dwarfing the successes of the past millennia, are the result of a thousandfold increase in the intellectual potential of people and its embodiment into real things.

*Remark.* In conclusion No.5 from Table 1, it would be stylistically correct to write not "our intellectual potential", but "his intellectual potential", but we are all human beings, therefore we are part of humanity, which means that from the point of view of logic it is necessary to write "our intellectual potential".

### **§4. Certain types of intellectual potential**

**Definition No.2.** The intellectual potential of a group of people is the number of people belonging to this group who have an IQ greater than 130 at a given time.

The intellectual potential of a group of people is designated IPG, as it is formed from the words "intelligence" and "potential" as well as "group of people".

A group of people should be understood as a limited community of people, numbering at least 100 thousand people (although it is better to take 0.4-0.5 million people as a minimum). Examples of such groups of people include soldiers, prisoners, students, doctors, sailors, university professors, officials, and so on.

**Definition No.3.** The intellectual potential of a country is the number of people living in that country with an IQ greater than 130 at a given time.

The intellectual potential of a country (state) is designated IPS, as it is formed from the words "intelligence" and "potential", as well as "state".

**Definition No.4.** The intellectual potential of an ethnic group is the number of people belonging to that ethnic group with an IQ greater than 130 at a given time.

The intellectual potential of the IPE ethnic group, as it is formed from the words "intelligence" and "potential", as well as "ethnos" and "ethnic group".

**Definition No.5.** The intellectual potential of a region is the number of people living in that region with an IQ greater than 130 at a given time.

The intellectual potential of the IPR region, as it is formed from the words "intelligence" and "potential", as well as "region".

Any geographically defined territory can act as a region, for example: an island, a historical or geographical region, an administrative unit, a local region of residence of one or more ethnic groups under study, and so on.

Examples of certain types of intellectual potentials:

IPG (soldiers, Germany) – the intellectual potential of soldiers in Germany.

IPS (France) – the intellectual potential of France.

IPE (Italians) – the intellectual potential of Italians.

IPR (Siberia) – the intellectual potential of the inhabitants of Siberia.

Intellectual potential:

I. Allows you to compare groups of people of the same size with each other.

II. Allows you to conclude how well the considered group of people manages their intellectual potential.

III. Indicates areas of work for those countries that are interested in emigrating intellectually gifted people.

Intellectual potential is embodied, for example, in:

1. The number of high-quality scientific papers.

2. The number of patented inventions.

3. The number of new books.

4. The number of songs created.

### ***§5. Analysis of the intellectual potential function***

The change in the value of intellectual potential over time is a time-dependent function that takes on its own value each year:  $f(t)$ .

For an example of mathematical analysis, we can consider the intellectual potential of humanity, IPH, represented as a function:  $f(t)=IPH(t)$

is the dimension of time in this function.:

In English:  $[t] = [\text{year}]$ .

Differentiation of the  $IPH(t)$  function allows us to find the first derivative, which will show the rate of change in the intellectual potential of humanity.:

$$\frac{d(IPH)}{dt}$$

The double differentiation of the  $IPH(t)$  function allows us to find the second derivative, which will show the acceleration or deceleration of the rate of change in the value of the intellectual potential of humanity:

$$\frac{d^2(IPH)}{dt^2}$$

The first and second derivatives for IPG, IPR, IPS and IPE may be of the greatest interest for practical application, since they allow us to see the change in the intellectual potential of the

considered group of people for each individual factor under study, which affects the average IQ of the analyzed people.

### **§6. Top-126 countries by percentage of people with IQ over 130 in 2024**

Table 2. Top-126 countries by percentage of people with an IQ greater than 130 in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	f(Z)	Percentage of people with an IQ greater than 130, %
1	China	107,19	1415,3	0,9358	6,417
2	South Korea	106,43	51,6	0,9419	5,805
3	Japan	106,40	122,9	0,9422	5,782
4	Iran	106,30	92,6	0,9429	5,705
5	Singapore	105,14	5,9	0,9513	4,873
6	Russia	103,16	143,8	0,9632	3,678
7	Mongolia	102,86	3,5	0,9648	3,520
8	Armenia	102,58	2,9	0,9662	3,377
9	Australia	102,57	27	0,9663	3,372
10	Spain	102,30	47,9	0,9676	3,240
11	New Zealand	102,08	5,3	0,9687	3,135
12	Sri Lanka	102,02	23,3	0,9689	3,107
13	Slovenia	101,96	2,1	0,9692	3,079
14	Canada	101,65	40,2	0,9706	2,938
15	Thailand	101,52	71,6	0,9712	2,880
16	Belarus	101,47	9	0,9714	2,859
17	France	101,42	66,7	0,9716	2,837
18	Serbia	100,86	6,7	0,9740	2,603
19	Italy	100,84	59	0,9741	2,595
20	Switzerland	100,75	9	0,9744	2,559
21	Georgia	100,59	3,8	0,9750	2,496
22	Malaysia	100,48	36,1	0,9755	2,453
23	Finland	100,30	5,6	0,9761	2,385
24	Vietnam	100,12	101,7	0,9768	2,319
25	Belgium	100,11	11,8	0,9769	2,315
26	Greece	100,07	9,9	0,9770	2,300
27	Luxembourg	100,00	0,7	0,9772	2,275
28	Iceland	99,99	0,4	0,9773	2,271
29	Slovakia	99,76	5,4	0,9781	2,190
30	USA	99,74	347,7	0,9782	2,183
31	Czech Republic	99,73	10,6	0,9782	2,180
32	Netherlands	99,72	18,4	0,9782	2,176
33	United Kingdom	99,68	69,6	0,9784	2,162
34	Austria	99,65	9,1	0,9785	2,152
35	Germany	99,64	83,9	0,9785	2,149

36	Hungary	99,46	9,6	0,9791	2,088
37	Lebanon	99,39	5,9	0,9794	2,064
38	Estonia	99,39	1,3	0,9794	2,064
39	Peru	99,37	34,6	0,9794	2,058
40	Poland	99,35	38	0,9795	2,051
41	Portugal	99,34	10,4	0,9795	2,048
42	Malta	99,19	0,5	0,9800	1,999
43	Croatia	99,17	3,8	0,9801	1,992
44	India	99,08	1466,9	0,9804	1,964
45	Turkey	99,07	87,7	0,9804	1,960
46	Israel	99,07	9,5	0,9804	1,960
47	Latvia	98,84	1,8	0,9811	1,889
48	Azerbaijan	98,71	10,4	0,9815	1,849
49	Lithuania	98,67	2,8	0,9816	1,837
50	Montenegro	98,65	0,6	0,9817	1,831
51	Norway	98,52	5,6	0,9821	1,792
52	Cyprus	98,51	1,4	0,9821	1,789
53	Sweden	98,49	10,7	0,9822	1,784
54	Ireland	98,32	5,3	0,9827	1,734
55	Brunei	98,14	0,5	0,9832	1,684
56	Denmark	97,94	6	0,9837	1,629
57	Bulgaria	97,79	6,7	0,9841	1,588
58	Bosnia and Herzegovina	97,62	3,1	0,9846	1,544
59	North Macedonia	97,59	1,8	0,9846	1,536
60	Tunisia	97,51	12,4	0,9848	1,516
61	Myanmar	97,37	54,9	0,9852	1,480
62	Moldova	97,32	3	0,9853	1,468
63	Egypt	97,21	118,7	0,9856	1,441
64	Albania	97,19	2,8	0,9856	1,436
65	Kazakhstan	97,17	20,9	0,9857	1,431
66	Nepal	97,07	29,6	0,9859	1,407
67	Algeria	97,01	47,6	0,9861	1,393
68	Mauritius	96,89	1,3	0,9864	1,365
69	UAE	96,80	11,4	0,9866	1,344
70	Uzbekistan	96,79	37,2	0,9866	1,341
71	Morocco	96,78	38,5	0,9866	1,339
72	Jordan	96,71	11,5	0,9868	1,323
73	Philippines	96,66	117	0,9869	1,312
74	Bangladesh	96,46	176,2	0,9873	1,268
75	Romania	96,31	18,9	0,9876	1,235
76	Cuba	96,02	10,9	0,9883	1,175
77	Mexico	95,51	132,2	0,9893	1,074
78	Ukraine	95,38	39,3	0,9895	1,050
79	Chile	95,38	19,9	0,9895	1,050
80	Ethiopia	95,09	136,3	0,9900	0,997

81	Kuwait	95,02	5	0,9901	0,985
82	Uruguay	95,01	3,4	0,9902	0,983
83	Ecuador	95,00	18,3	0,9902	0,982
84	Kyrgyzstan	94,85	7,3	0,9904	0,956
85	Madagascar	94,80	32,9	0,9905	0,947
86	Qatar	94,77	3,1	0,9906	0,942
87	Argentina	94,39	45,9	0,9912	0,880
88	Costa Rica	94,15	5,2	0,9916	0,842
89	South Africa	94,11	64,9	0,9916	0,836
90	Oman	94,08	5,5	0,9917	0,832
91	Bahrain	94,04	1,7	0,9917	0,826
92	Iraq	93,99	47,2	0,9918	0,818
93	Cambodia	93,97	17,9	0,9918	0,815
94	Saudi Arabia	93,95	34,7	0,9919	0,812
95	Tajikistan	93,55	10,8	0,9925	0,755
96	Yemen	93,30	42	0,9928	0,721
97	Pakistan	93,25	256,1	0,9929	0,714
98	Indonesia	93,18	286,2	0,9929	0,705
99	Colombia	93,17	53,6	0,9930	0,704
100	Brazil	92,92	213	0,9933	0,672
101	Bolivia	92,76	12,6	0,9935	0,652
102	Laos	92,05	7,9	0,9943	0,570
103	Nigeria	91,35	238,7	0,9950	0,499
104	Guatemala	91,29	18,7	0,9951	0,493
105	Kenya	91,22	57,8	0,9951	0,486
106	El Salvador	91,07	6,3	0,9953	0,472
107	Venezuela	91,02	28,5	0,9953	0,468
108	Puerto Rico	90,94	3,2	0,9954	0,461
109	Paraguay	90,76	7	0,9956	0,445
110	Honduras	90,53	11	0,9957	0,425
111	Panama	90,49	4,6	0,9958	0,422
112	Ghana	90,25	35,2	0,9960	0,402
113	Zimbabwe	90,21	17	0,9960	0,399
114	Dominican Republic	90,06	11,5	0,9961	0,388
115	Togo	89,94	9,8	0,9962	0,379
116	Cameroon	89,94	30	0,9962	0,379
117	Uganda	89,89	51,7	0,9963	0,375
118	Tanzania	89,40	71	0,9966	0,340
119	Nicaragua	88,70	7	0,9971	0,295
120	Senegal	88,27	19	0,9973	0,270
121	Democratic Republic of the Congo	88,01	113,6	0,9974	0,256
122	Republic of the Congo	88,01	6,5	0,9974	0,256

123	Mozambique	87,81	35,9	0,9975	0,246
124	Benin	86,88	14,9	0,9980	0,202
125	Angola	85,33	39,3	0,9985	0,145
126	Gabon	85,08	2,6	0,9986	0,137

### § 7. Top-126 countries in the world by intellectual potential in 2024

Two quotes from the source [3] :

1. " AverageIQ : 100".

2. "Below is the average IQ by country, updated as of January 1, 2025. This study is based on data from 1,352,763 people worldwide who took the same IQ test (mean: 100, SD: 15) on this website in 2024".

Table 3. Top-126 countries by intellectual potential in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	f(Z)	The percentage of people with an IQ greater than 130, %	Intellectual potential of the country (IPS) , million people with an IQ greater than 130
1	China	107,19	1415,3	0,9358	6,417	90,822
2	India	99,08	1466,9	0,9804	1,964	28,803
3	USA	99,74	347,7	0,9782	2,183	7,590
4	Japan	106,40	122,9	0,9422	5,782	7,106
5	Russia	103,16	143,8	0,9632	3,678	5,289
6	Iran	106,30	92,6	0,9429	5,705	5,283
7	South Korea	106,43	51,6	0,9419	5,805	2,996
8	Vietnam	100,12	101,7	0,9768	2,319	2,358
9	Bangladesh	96,46	176,2	0,9873	1,268	2,233
10	Thailand	101,52	71,6	0,9712	2,880	2,062
11	Indonesia	93,18	286,2	0,9929	0,705	2,018
12	France	101,42	66,7	0,9716	2,837	1,892
13	Pakistan	93,25	256,1	0,9929	0,714	1,829
14	Germany	99,64	83,9	0,9785	2,149	1,803
15	Turkey	99,07	87,7	0,9804	1,960	1,719
16	Egypt	97,21	118,7	0,9856	1,441	1,710
17	Spain	102,30	47,9	0,9676	3,240	1,552
18	Philippines	96,66	117	0,9869	1,312	1,535
19	Italy	100,84	59	0,9741	2,595	1,531
20	United Kingdom	99,68	69,6	0,9784	2,162	1,505
21	Brazil	92,92	213	0,9933	0,672	1,431
22	Mexico	95,51	132,2	0,9893	1,074	1,420
23	Ethiopia	95,09	136,3	0,9900	0,997	1,359
24	Nigeria	91,35	238,7	0,9950	0,499	1,191
25	Canada	101,65	40,2	0,9706	2,938	1,181
26	Australia	102,57	27	0,9663	3,372	0,911

27	Malaysia	100,48	36,1	0,9755	2,453	0,886
28	Myanmar	97,37	54,9	0,9852	1,480	0,813
29	Poland	99,35	38	0,9795	2,051	0,779
30	Sri Lanka	102,02	23,3	0,9689	3,107	0,724
31	Peru	99,37	34,6	0,9794	2,058	0,712
32	Algeria	97,01	47,6	0,9861	1,393	0,663
33	South Africa	94,11	64,9	0,9916	0,836	0,543
34	Morocco	96,78	38,5	0,9866	1,339	0,516
35	Uzbekistan	96,79	37,2	0,9866	1,341	0,499
36	Nepal	97,07	29,6	0,9859	1,407	0,416
37	Ukraine	95,38	39,3	0,9895	1,050	0,413
38	Argentina	94,39	45,9	0,9912	0,880	0,404
39	Netherlands	99,72	18,4	0,9782	2,176	0,400
40	Iraq	93,99	47,2	0,9918	0,818	0,386
41	Colombia	93,17	53,6	0,9930	0,704	0,377
42	Madagascar	94,80	32,9	0,9905	0,947	0,312
43	Yemen	93,30	42	0,9928	0,721	0,303
44	Kazakhstan	97,17	20,9	0,9857	1,431	0,299
45	Democratic Republic of the Congo	88,01	113,6	0,9974	0,256	0,291
46	Singapore	105,14	5,9	0,9513	4,873	0,287
47	Saudi Arabia	93,95	34,7	0,9919	0,812	0,282
48	Kenya	91,22	57,8	0,9951	0,486	0,281
49	Belgium	100,11	11,8	0,9769	2,315	0,273
50	Belarus	101,47	9	0,9714	2,859	0,257
51	Tanzania	89,40	71	0,9966	0,340	0,241
52	Romania	96,31	18,9	0,9876	1,235	0,233
53	Czech Republic	99,73	10,6	0,9782	2,180	0,231
54	Switzerland	100,75	9	0,9744	2,559	0,230
55	Greece	100,07	9,9	0,9770	2,300	0,228
56	Portugal	99,34	10,4	0,9795	2,048	0,213
57	Chile	95,38	19,9	0,9895	1,050	0,209
58	Hungary	99,46	9,6	0,9791	2,088	0,200
59	Austria	99,65	9,1	0,9785	2,152	0,196
60	Uganda	89,89	51,7	0,9963	0,375	0,194
61	Azerbaijan	98,71	10,4	0,9815	1,849	0,192
62	Sweden	98,49	10,7	0,9822	1,784	0,191
63	Tunisia	97,51	12,4	0,9848	1,516	0,188
64	Israel	99,07	9,5	0,9804	1,960	0,186
65	Ecuador	95,00	18,3	0,9902	0,982	0,180
66	Serbia	100,86	6,7	0,9740	2,603	0,174
67	New Zealand	102,08	5,3	0,9687	3,135	0,166
68	UAE	96,80	11,4	0,9866	1,344	0,153
69	Jordan	96,71	11,5	0,9868	1,323	0,152
70	Cambodia	93,97	17,9	0,9918	0,815	0,146

71	Ghana	90,25	35,2	0,9960	0,402	0,142
72	Finland	100,30	5,6	0,9761	2,385	0,134
73	Venezuela	91,02	28,5	0,9953	0,468	0,133
74	Cuba	96,02	10,9	0,9883	1,175	0,128
75	Mongolia	102,86	3,5	0,9648	3,520	0,123
76	Lebanon	99,39	5,9	0,9794	2,064	0,122
77	Slovakia	99,76	5,4	0,9781	2,190	0,118
78	Cameroon	89,94	30	0,9962	0,379	0,114
79	Bulgaria	97,79	6,7	0,9841	1,588	0,106
80	Norway	98,52	5,6	0,9821	1,792	0,100
81	Armenia	102,58	2,9	0,9662	3,377	0,098
82	Denmark	97,94	6	0,9837	1,629	0,098
83	Georgia	100,59	3,8	0,9750	2,496	0,095
84	Guatemala	91,29	18,7	0,9951	0,493	0,092
85	Ireland	98,32	5,3	0,9827	1,734	0,092
86	Mozambique	87,81	35,9	0,9975	0,246	0,088
87	Bolivia	92,76	12,6	0,9935	0,652	0,082
88	Tajikistan	93,55	10,8	0,9925	0,755	0,082
89	Croatia	99,17	3,8	0,9801	1,992	0,076
90	Kyrgyzstan	94,85	7,3	0,9904	0,956	0,070
91	Zimbabwe	90,21	17	0,9960	0,399	0,068
92	Slovenia	101,96	2,1	0,9692	3,079	0,065
93	Angola	85,33	39,3	0,9985	0,145	0,057
94	Lithuania	98,67	2,8	0,9816	1,837	0,051
95	Senegal	88,27	19	0,9973	0,270	0,051
96	Kuwait	95,02	5	0,9901	0,985	0,049
97	Bosnia and Herzegovina	97,62	3,1	0,9846	1,544	0,048
98	Honduras	90,53	11	0,9957	0,425	0,047
99	Oman	94,08	5,5	0,9917	0,832	0,046
100	Laos	92,05	7,9	0,9943	0,570	0,045
101	Dominican Republic	90,06	11,5	0,9961	0,388	0,045
102	Moldova	97,32	3	0,9853	1,468	0,044
103	Costa Rica	94,15	5,2	0,9916	0,842	0,044
104	Albania	97,19	2,8	0,9856	1,436	0,040
105	Togo	89,94	9,8	0,9962	0,379	0,037
106	Latvia	98,84	1,8	0,9811	1,889	0,034
107	Uruguay	95,01	3,4	0,9902	0,983	0,033
108	Paraguay	90,76	7	0,9956	0,445	0,031
109	Benin	86,88	14,9	0,9980	0,202	0,030
110	El Salvador	91,07	6,3	0,9953	0,472	0,030
111	Qatar	94,77	3,1	0,9906	0,942	0,029
112	North Macedonia	97,59	1,8	0,9846	1,536	0,028
113	Estonia	99,39	1,3	0,9794	2,064	0,027
114	Cyprus	98,51	1,4	0,9821	1,789	0,025

115	Nicaragua	88,70	7	0,9971	0,295	0,021
116	Panama	90,49	4,6	0,9958	0,422	0,019
117	Mauritius	96,89	1,3	0,9864	1,365	0,018
118	Republic of the Congo	88,01	6,5	0,9974	0,256	0,017
119	Luxembourg	100,00	0,7	0,9772	2,275	0,016
120	Puerto Rico	90,94	3,2	0,9954	0,461	0,015
121	Bahrain	94,04	1,7	0,9917	0,826	0,014
122	Montenegro	98,65	0,6	0,9817	1,831	0,011
123	Malta	99,19	0,5	0,9800	1,999	0,010
124	Iceland	99,99	0,4	0,9773	2,271	0,009
125	Brunei	98,14	0,5	0,9832	1,684	0,008
126	Gabon	85,08	2,6	0,9986	0,137	0,004

### §8. Using intellectual potential

**Definition No.6.** The use of intellectual potential is the creation of objects of intellectual labor by the whole of humanity or a group of people united on some basis in one clearly defined area in the year in question.

The use of intellectual potential is indicated by the letter "U" from the words "use" (Rus) and "usage" (Eng).

Examples:

UIPH (patents, 2024) – humanity's use of its intellectual potential in the field of technical creativity (obtaining patents) in 2024.

UIPG (students, Japan, music, 2000) – Japanese students using their intellectual potential in music in 2000.

UIPS (USA, science articles, 2010) – the use of the United States of its intellectual potential in science (publication of scientific articles) in 2010.

UIPE (Russians, books, 2020) – Russians using their intellectual potential in the field of printing in 2020.

UIPR (Asia, patents, 2022) – the use of Asian residents of their intellectual potential in the field of technical creativity (obtaining patents) in 2022.

The dimension of the use of intellectual potential:

$$\text{In English: [UIP]} = \left[ \frac{\text{units}}{\text{mln} * \text{people}} \right]$$

The word "units" in Russian should be understood as the number of individual units of completed intellectual work, for example, the number of published scientific articles or books.

You can also use a short form of notation, for example:

UIPGM (students, Japan, 2000) – Japanese students used their intellectual potential in music in 2000 (where "M" stands for "music").

UIPS (USA, SA, 2010) – the use of the United States of its intellectual potential in science (publication of scientific articles) in 2010 (where "SA" stands for "science articles").

UIPEB (Russians, 2020) – Russians using their intellectual potential in the field of printing in 2020 (where "B" stands for "books").

UIPRP (Asia, 2022) – the use of Asian residents of their intellectual potential in the field of technical creativity (obtaining patents) in 2022 (where "P" stands for "patents").

**§9. Analysis of the function of using intellectual potential**

The change in the use of intellectual potential over time is a time-dependent function that takes on its own value each year:  $f(t)$ .

For an example of mathematical analysis, we can consider the use of the intellectual potential of humanity UIPHM in music, represented as a function:  $f(t)=UIPHM(t)$

The dimension of time in this function:

In English:  $[t] = [\text{year}]$ .

Differentiation of the  $IPHM(t)$  function allows us to find the first derivative, which will show the rate of change in the use of humanity's intellectual potential in music:

$$\frac{d(IPHM)}{dt}$$

Double differentiation of the  $IPHM(t)$  function allows us to find the second derivative, which will show the acceleration or deceleration of the rate of change in the use of humanity's intellectual potential in music.:

$$\frac{d^2(IPHM)}{dt^2}$$

The first and second derivatives for IPG, IPR, IPS and IPE may be of the greatest interest for practical application, since they allow us to see the change in the intellectual potential of the group of people under consideration for each individual factor under study in the analyzed field of activity.

**§10. Top-120 countries by intellectual potential in science in 2024**

Table 4 compares 120 countries with each other, and Tables 5, 6, 7, 8, 9, 10, and 11 compare countries with similar population sizes.

Table 4. Top-120 countries by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people
1	Switzerland	100,75	9,0	0,2303	1453,55	6311,8
2	Denmark	97,94	6,0	0,0977	603,39	6175,2
3	Sweden	98,49	10,7	0,1908	812,91	4259,8
4	Iceland	99,99	0,4	0,0091	37,03	4075,7
5	Israel	99,07	9,5	0,1862	640,25	3437,8
6	Netherlands	99,72	18,4	0,4004	1150,01	2872,2
7	USA	99,74	347,7	7,5904	21631,57	2849,9
8	Germany	99,64	83,9	1,8026	4860,47	2696,4
9	United Kingdom	99,68	69,6	1,5049	3905,83	2595,4
10	Norway	98,52	5,6	0,1004	242,35	2414,6
11	Singapore	105,14	5,9	0,2875	681,96	2372,2
12	Austria	99,65	9,1	0,1958	436,10	2227,0

13	Finland	100,30	5,6	0,1336	288,63	2160,9
14	Belgium	100,11	11,8	0,2732	520,05	1903,8
15	Canada	101,65	40,2	1,1810	1867,67	1581,4
16	Australia	102,57	27,0	0,9106	1429,48	1569,9
17	Luxembourg	100,00	0,7	0,0159	23,70	1488,2
18	Ireland	98,32	5,3	0,0919	133,68	1454,3
19	France	101,42	66,7	1,8922	2401,75	1269,3
20	Czech Republic	99,73	10,6	0,2310	276,27	1195,8
21	Estonia	99,39	1,3	0,0268	27,15	1011,8
22	Italy	100,84	59,0	1,5309	1409,49	920,7
23	New Zealand	102,08	5,3	0,1661	151,80	913,6
24	Spain	102,30	47,9	1,5518	1353,81	872,4
25	Slovenia	101,96	2,1	0,0647	53,35	825,1
26	Cyprus	98,51	1,4	0,0251	19,84	792,0
27	Portugal	99,34	10,4	0,2130	157,87	741,3
28	South Korea	106,43	51,6	2,9955	2008,50	670,5
29	Saudi Arabia	93,95	34,7	0,2819	180,76	641,3
30	Chile	95,38	19,9	0,2089	133,68	639,8
31	Hungary	99,46	9,6	0,2004	115,66	577,1
32	Japan	106,40	122,9	7,1062	3256,21	458,2
33	Poland	99,35	38,0	0,7794	354,98	455,5
34	Greece	100,07	9,9	0,2277	99,67	437,7
35	Qatar	94,77	3,1	0,0292	12,45	426,3
36	Croatia	99,17	3,8	0,0757	30,07	397,2
37	China	107,19	1415,3	90,8223	35103,19	386,5
38	Panama	90,49	4,6	0,0194	7,20	371,0
39	Taiwan	107,10	23,0	1,4587	537,05	368,2
40	Malta	99,19	0,5	0,0100	3,52	352,2
41	UAE	96,80	11,4	0,1532	52,56	343,1
42	Lithuania	98,67	2,8	0,0514	16,25	315,9
43	Latvia	98,84	1,8	0,0340	10,15	298,6
44	Brazil	92,92	213,0	1,4309	384,09	268,4
45	Argentina	94,39	45,9	0,4038	88,36	218,8
46	South Africa	94,11	64,9	0,5428	105,03	193,5
47	Oman	94,08	5,5	0,0457	7,64	167,0
48	Bulgaria	97,79	6,7	0,1064	16,23	152,5
49	Romania	96,31	18,9	0,2335	35,12	150,4
50	Uruguay	95,01	3,4	0,0334	4,89	146,3
51	Slovakia	99,76	5,4	0,1183	17,11	144,7
52	Costa Rica	94,15	5,2	0,0438	6,32	144,3
53	Uganda	89,89	51,7	0,1938	21,46	110,8
54	Zimbabwe	90,21	17,0	0,0679	6,41	94,4
55	Armenia	102,58	2,9	0,0979	8,62	88,0
56	Mauritius	96,89	1,3	0,0177	1,55	87,4
57	Georgia	100,59	3,8	0,0948	8,20	86,5
58	Kenya	91,22	57,8	0,2812	24,20	86,1
59	Montenegro	98,65	0,6	0,0110	0,88	80,1
60	Ukraine	95,38	39,3	0,4126	32,83	79,6
61	Turkey	99,07	87,7	1,7193	127,97	74,4

62	Mexico	95,51	132,2	1,4202	103,83	73,1
63	Russia	103,16	143,8	5,2890	377,95	71,5
64	North Macedonia	97,59	1,8	0,0276	1,92	69,4
65	Colombia	93,17	53,6	0,3772	25,73	68,2
66	India	99,08	1466,9	28,8034	1862,67	64,7
67	Serbia	100,86	6,7	0,1744	9,61	55,1
68	Kuwait	95,02	5,0	0,0493	2,67	54,2
69	Benin	86,88	14,9	0,0301	1,58	52,4
70	Cameroon	89,94	30,0	0,1136	5,93	52,2
71	Nicaragua	88,70	7,0	0,0206	1,02	49,4
72	Senegal	88,27	19,0	0,0513	2,43	47,3
73	Ghana	90,25	35,2	0,1417	6,62	46,7
74	Lebanon	99,39	5,9	0,1218	5,28	43,4
75	Tanzania	89,40	71,0	0,2413	10,39	43,1
76	Ecuador	95,00	18,3	0,1796	7,70	42,9
77	Thailand	101,52	71,6	2,0624	88,26	42,8
78	Uzbekistan	96,79	37,2	0,4990	19,24	38,6
79	Azerbaijan	98,71	10,4	0,1923	7,23	37,6
80	Morocco	96,78	38,5	0,5156	18,43	35,7
81	Paraguay	90,76	7,0	0,0311	1,03	33,1
82	Jordan	96,71	11,5	0,1522	4,81	31,6
83	Laos	92,05	7,9	0,0451	1,31	29,1
84	Bahrain	94,04	1,7	0,0140	0,40	28,5
85	Moldova	97,32	3,0	0,0440	1,24	28,2
86	Democratic Republic of the Congo	88,01	113,6	0,2909	7,72	26,5
87	Kazakhstan	97,17	20,9	0,2991	7,69	25,7
88	Pakistan	93,25	256,1	1,8293	41,57	22,7
89	Albania	97,19	2,8	0,0402	0,91	22,6
90	Iran	106,30	92,6	5,2831	118,94	22,5
91	Cambodia	93,97	17,9	0,1459	2,89	19,8
92	Malaysia	100,48	36,1	0,8857	16,09	18,2
93	Tajikistan	93,55	10,8	0,0815	1,46	17,9
94	Vietnam	100,12	101,7	2,3580	40,92	17,4
95	Tunisia	97,51	12,4	0,1879	3,18	16,9
96	Mozambique	87,81	35,9	0,0882	1,37	15,5
97	Bolivia	92,76	12,6	0,0822	1,26	15,3
98	Mongolia	102,86	3,5	0,1232	1,82	14,8
99	Peru	99,37	34,6	0,7119	9,95	14,0
100	Egypt	97,21	118,7	1,7102	21,86	12,8
101	Indonesia	93,18	286,2	2,0179	22,49	11,1
102	Guatemala	91,29	18,7	0,0922	1,01	11,0
103	Venezuela	91,02	28,5	0,1334	1,40	10,5
104	Algeria	97,01	47,6	0,6629	6,77	10,2
105	Kyrgyzstan	94,85	7,3	0,0698	0,71	10,2
106	Belarus	101,47	9,0	0,2573	2,58	10,0
107	Dominican Republic	90,06	11,5	0,0446	0,44	9,9

108	Nepal	97,07	29,6	0,4165	3,62	8,7
109	Nigeria	91,35	238,7	1,1906	9,78	8,2
110	Cuba	96,02	10,9	0,1280	0,98	7,7
111	Madagascar	94,80	32,9	0,3116	2,25	7,2
112	Bangladesh	96,46	176,2	2,2335	15,25	6,8
113	Philippines	96,66	117,0	1,5349	10,39	6,8
114	Ethiopia	95,09	136,3	1,3594	8,19	6,0
115	Sri Lanka	102,02	23,3	0,7239	3,48	4,8
116	Iraq	93,99	47,2	0,3862	1,09	2,8
117	Myanmar	97,37	54,9	0,8127	1,34	1,6
118	Bosnia and Herzegovina	97,62	3,1	0,0479	0,05	1,0
119	Togo	89,94	9,8	0,0371	0,03	0,8
120	Yemen	93,30	42,0	0,3028	0,06	0,2

Table 5. Top-2 countries with a population of 400 million and above by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	China	107.19	1415.3	90,8223	35103.19	386.5	100.0
2	India	99.08	1466.9	28,8034	1862.67	64.7	16.7

Table 6. Top-14 countries with populations from 100 to 400 million people by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	USA	99,74	347,7	7,5904	21631,57	2849,9	100,0
2	Japan	106,40	122,9	7,1062	3256,21	458,2	16,1
3	Brazil	92,92	213,0	1,4309	384,09	268,4	9,4
4	Mexico	95,51	132,2	1,4202	103,83	73,1	2,6
5	Russia	103,16	143,8	5,2890	377,95	71,5	2,5

6	Democratic Republic of the Congo	88,01	113,6	0,2909	7,72	26,5	0,9
7	Pakistan	93,25	256,1	1,8293	41,57	22,7	0,8
8	Vietnam	100,12	101,7	2,3580	40,92	17,4	0,6
9	Egypt	97,21	118,7	1,7102	21,86	12,8	0,4
10	Indonesia	93,18	286,2	2,0179	22,49	11,1	0,4
11	Nigeria	91,35	238,7	1,1906	9,78	8,2	0,3
12	Bangladesh	96,46	176,2	2,2335	15,25	6,8	0,2
13	Philippines	96,66	117,0	1,5349	10,39	6,8	0,2
14	Ethiopia	95,09	136,3	1,3594	8,19	6,0	0,2

Table 7. Top-31 countries with populations from 30 to 100 million people by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	Germany	99,64	83,9	1,8026	4860,47	2696,4	100,0
2	United Kingdom	99,68	69,6	1,5049	3905,83	2595,4	96,3
3	Canada	101,65	40,2	1,1810	1867,67	1581,4	58,6
4	France	101,42	66,7	1,8922	2401,75	1269,3	47,1
5	Italy	100,84	59,0	1,5309	1409,49	920,7	34,1
6	Spain	102,30	47,9	1,5518	1353,81	872,4	32,4
7	South Korea	106,43	51,6	2,9955	2008,50	670,5	24,9
8	Saudi Arabia	93,95	34,7	0,2819	180,76	641,3	23,8
9	Poland	99,35	38,0	0,7794	354,98	455,5	16,9
10	Argentina	94,39	45,9	0,4038	88,36	218,8	8,1
11	South Africa	94,11	64,9	0,5428	105,03	193,5	7,2
12	Uganda	89,89	51,7	0,1938	21,46	110,8	4,1
13	Kenya	91,22	57,8	0,2812	24,20	86,1	3,2
14	Ukraine	95,38	39,3	0,4126	32,83	79,6	3,0
15	Turkey	99,07	87,7	1,7193	127,97	74,4	2,8
16	Colombia	93,17	53,6	0,3772	25,73	68,2	2,5
17	Cameroon	89,94	30,0	0,1136	5,93	52,2	1,9
18	Ghana	90,25	35,2	0,1417	6,62	46,7	1,7
19	Tanzania	89,40	71,0	0,2413	10,39	43,1	1,6
20	Thailand	101,52	71,6	2,0624	88,26	42,8	1,6
21	Uzbekistan	96,79	37,2	0,4990	19,24	38,6	1,4
22	Morocco	96,78	38,5	0,5156	18,43	35,7	1,3
23	Iran	106,30	92,6	5,2831	118,94	22,5	0,8
24	Malaysia	100,48	36,1	0,8857	16,09	18,2	0,7
25	Mozambique	87,81	35,9	0,0882	1,37	15,5	0,6
26	Peru	99,37	34,6	0,7119	9,95	14,0	0,5

27	Algeria	97,01	47,6	0,6629	6,77	10,2	0,4
28	Madagascar	94,80	32,9	0,3116	2,25	7,2	0,3
29	Iraq	93,99	47,2	0,3862	1,09	2,8	0,1
30	Myanmar	97,37	54,9	0,8127	1,34	1,6	0,1
31	Yemen	93,30	42,0	0,3028	0,06	0,2	0,0

Table 8. Top-27 countries with populations from 10 to 30 million people by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	Sweden	99,64	10,7	0,1908	812,91	4259,8	100,0
2	Netherlands	99,68	18,4	0,4004	1150,01	2872,2	67,4
3	Belgium	101,65	11,8	0,2732	520,05	1903,8	44,7
4	Australia	101,42	27,0	0,9106	1429,48	1569,9	36,9
5	Czech Republic	100,84	10,6	0,2310	276,27	1195,8	28,1
6	Portugal	102,30	10,4	0,2130	157,87	741,3	17,4
7	Chile	106,43	19,9	0,2089	133,68	639,8	15,0
8	Taiwan	93,95	23,0	1,4587	537,05	368,2	8,6
9	UAE	99,35	11,4	0,1532	52,56	343,1	8,1
10	Romania	94,39	18,9	0,2335	35,12	150,4	3,5
11	Zimbabwe	94,11	17,0	0,0679	6,41	94,4	2,2
12	Benin	89,89	14,9	0,0301	1,58	52,4	1,2
13	Senegal	91,22	19,0	0,0513	2,43	47,3	1,1
14	Ecuador	95,38	18,3	0,1796	7,70	42,9	1,0
15	Azerbaijan	99,07	10,4	0,1923	7,23	37,6	0,9
16	Jordan	93,17	11,5	0,1522	4,81	31,6	0,7
17	Kazakhstan	89,94	20,9	0,2991	7,69	25,7	0,6
18	Cambodia	90,25	17,9	0,1459	2,89	19,8	0,5
19	Tajikistan	89,40	10,8	0,0815	1,46	17,9	0,4
20	Tunisia	101,52	12,4	0,1879	3,18	16,9	0,4
21	Bolivia	96,79	12,6	0,0822	1,26	15,3	0,4
22	Guatemala	96,78	18,7	0,0922	1,01	11,0	0,3
23	Venezuela	106,30	28,5	0,1334	1,40	10,5	0,2
24	Dominican Republic	100,48	11,5	0,0446	0,44	9,9	0,2
25	Nepal	87,81	29,6	0,4165	3,62	8,7	0,2
26	Cuba	99,37	10,9	0,1280	0,98	7,7	0,2
27	Sri Lanka	97,01	23,3	0,7239	3,48	4,8	0,1

Table 9. Top-32 countries with populations from 3 to 10 million people by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	Switzerland	100,75	9,0	0,2303	1453,55	6311,8	100,0
2	Denmark	97,94	6,0	0,0977	603,39	6175,2	97,8
3	Israel	99,07	9,5	0,1862	640,25	3437,8	54,5
4	Norway	98,52	5,6	0,1004	242,35	2414,6	38,3
5	Singapore	105,14	5,9	0,2875	681,96	2372,2	37,6
6	Austria	99,65	9,1	0,1958	436,10	2227,0	35,3
7	Finland	100,3	5,6	0,1336	288,63	2160,9	34,2
8	Ireland	98,32	5,3	0,0919	133,68	1454,3	23,0
9	New Zealand	102,08	5,3	0,1661	151,80	913,6	14,5
10	Hungary	99,46	9,6	0,2004	115,66	577,1	9,1
11	Greece	100,07	9,9	0,2277	99,67	437,7	6,9
12	Qatar	94,77	3,1	0,0292	12,45	426,3	6,8
13	Croatia	99,17	3,8	0,0757	30,07	397,2	6,3
14	Panama	90,49	4,6	0,0194	7,20	371,0	5,9
15	Oman	94,08	5,5	0,0457	7,64	167,0	2,6
16	Bulgaria	97,79	6,7	0,1064	16,23	152,5	2,4
17	Uruguay	95,01	3,4	0,0334	4,89	146,3	2,3
18	Slovakia	99,76	5,4	0,1183	17,11	144,7	2,3
19	Costa Rica	94,15	5,2	0,0438	6,32	144,3	2,3
20	Georgia	100,59	3,8	0,0948	8,20	86,5	1,4
21	Serbia	100,86	6,7	0,1744	9,61	55,1	0,9
22	Kuwait	95,02	5,0	0,0493	2,67	54,2	0,9
23	Nicaragua	88,7	7,0	0,0206	1,02	49,4	0,8
24	Lebanon	99,39	5,9	0,1218	5,28	43,4	0,7
25	Paraguay	90,76	7,0	0,0311	1,03	33,1	0,5
26	Laos	92,05	7,9	0,0451	1,31	29,1	0,5
27	Moldova	97,32	3,0	0,0440	1,24	28,2	0,4
28	Mongolia	102,86	3,5	0,1232	1,82	14,8	0,2
29	Kyrgyzstan	94,85	7,3	0,0698	0,71	10,2	0,2
30	Belarus	101,47	9,0	0,2573	2,58	10,0	0,2
31	Bosnia and Herzegovina	97,62	3,1	0,0479	0,05	1,0	0,0
32	Togo	89,94	9,8	0,0371	0,03	0,8	0,0

Table 10. Top-10 countries with populations from 1 to 3 million people by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	Estonia	99,39	1,3	0,0268	27,15	1011,8	100,0
2	Slovenia	101,96	2,1	0,0647	53,35	825,1	81,6
3	Cyprus	98,51	1,4	0,0251	19,84	792,0	78,3
4	Lithuania	98,67	2,8	0,0514	16,25	315,9	31,2
5	Latvia	98,84	1,8	0,0340	10,15	298,6	29,5
6	Armenia	102,58	2,9	0,0979	8,62	88,0	8,7
7	Mauritius	96,89	1,3	0,0177	1,55	87,4	8,6
8	North Macedonia	97,59	1,8	0,0276	1,92	69,4	6,9
9	Bahrain	94,04	1,7	0,0140	0,40	28,5	2,8
10	Albania	97,19	2,8	0,0402	0,91	22,6	2,2

Table 11. Top-4 countries with a population under 1 million by the use of intellectual potential in science in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Share of scientific contribution to all articles from the ranking [2]	Usage intellectual potential in science, UIPS (science articles), scientific contribution per million people	Relative percentage, %
1	Iceland	99,99	0,4	0,0091	37,03	4075,7	100,0
2	Luxembourg	100,00	0,7	0,0159	23,70	1488,2	36,5
3	Malta	99,19	0,5	0,0100	3,52	352,2	8,6
4	Montenegro	98,65	0,6	0,0110	0,88	80,1	2,0

**§11. Top-98 countries by intellectual potential in technology in 2024**

Table 12 compares 98 countries with each other, and Tables 13, 14, 15, 16, 17, 18, and 19 compare countries with similar population sizes.

Table 12. Top-98 countries by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents), patents per million people
1	South Korea	106,43	51,6	2,9955	191142	63809
2	USA	99,74	347,7	7,5904	275897	36348
3	Japan	106,4	122,9	7,1062	228936	32216
4	Germany	99,64	83,9	1,8026	38489	21352
5	China	107,19	1415,3	90,8223	1522292	16761
6	Finland	100,30	5,6	0,1336	1672	12518
7	Denmark	97,94	6,0	0,0977	1078	11032
8	Saudi Arabia	93,95	34,7	0,2819	2819	10001
9	Sweden	98,49	10,7	0,1908	1857	9731
10	Austria	99,65	9,1	0,1958	1777	9074
11	Norway	98,52	5,6	0,1004	815	8120
12	Israel	99,07	9,5	0,1862	1435	7705
13	United Kingdom	99,68	69,6	1,5049	11487	7633
14	France	101,42	66,7	1,8922	13602	7189
15	Luxembourg	100,00	0,7	0,0159	106	6656
16	Singapore	105,14	5,9	0,2875	1621	5639
17	Italy	100,84	59,0	1,5309	8478	5538
18	Switzerland	100,75	9,0	0,2303	1190	5167
19	Poland	99,35	38,0	0,7794	3946	5063
20	Turkey	99,07	87,7	1,7193	8429	4903
21	Netherlands	99,72	18,4	0,4004	1819	4543
22	Latvia	98,84	1,8	0,0340	140	4118
23	Russia	103,16	143,8	5,2890	20623	3899
24	Romania	96,31	18,9	0,2335	817	3500
25	Brazil	92,92	213,0	1,4309	4973	3475
26	Canada	101,65	40,2	1,1810	4097	3469
27	Portugal	99,34	10,4	0,2130	719	3376
28	Australia	102,57	27,0	0,9106	2511	2758
29	Belgium	100,11	11,8	0,2732	716	2621
30	Ukraine	95,38	39,3	0,4126	1010	2448
31	Kazakhstan	97,17	20,9	0,2991	693	2317
32	Iceland	99,99	0,4	0,0091	21	2311
33	Greece	100,07	9,9	0,2277	499	2191
34	Croatia	99,17	3,8	0,0757	164	2166
35	Slovenia	101,96	2,1	0,0647	139	2150
36	Algeria	97,01	47,6	0,6629	1396	2106
37	Czech Republic	99,73	10,6	0,2310	465	2013
38	Slovakia	99,76	5,4	0,1183	232	1962
39	Qatar	94,77	3,1	0,0292	57	1952
40	Hungary	99,46	9,6	0,2004	383	1911
41	Chile	95,38	19,9	0,2089	395	1890
42	Iraq	93,99	47,2	0,3862	727	1882

43	New Zealand	102,08	5,3	0,1661	310	1866
44	Bulgaria	97,79	6,7	0,1064	185	1738
45	India	99,08	1466,9	28,8034	49860	1731
46	Iran	106,3	92,6	5,2831	8503	1609
47	Lithuania	98,67	2,8	0,0514	66	1283
48	Kenya	91,22	57,8	0,2812	360	1280
49	Oman	94,08	5,5	0,0457	55	1202
50	Azerbaijan	98,71	10,4	0,1923	201	1045
51	Argentina	94,39	45,9	0,4038	421	1042
52	Uzbekistan	96,79	37,2	0,4990	518	1038
53	Georgia	100,59	3,8	0,0948	96	1012
54	Belarus	101,47	9,0	0,2573	256	995
55	Ireland	98,32	5,3	0,0919	90	979
56	Kyrgyzstan	94,85	7,3	0,0698	67	960
57	Malaysia	100,48	36,1	0,8857	843	952
58	UAE	96,80	11,4	0,1532	144	940
59	Estonia	99,39	1,3	0,0268	25	932
60	Bosnia and Herzegovina	97,62	3,1	0,0479	44	919
61	Indonesia	93,18	286,2	2,0179	1682	834
62	South Africa	94,11	64,9	0,5428	413	761
63	Spain	102,3	47,9	1,5518	1149	740
64	Montenegro	98,65	0,6	0,0110	8	728
65	Colombia	93,17	53,6	0,3772	266	705
66	Malta	99,19	0,5	0,0100	7	700
67	Mexico	95,51	132,2	1,4202	978	689
68	North Macedonia	97,59	1,8	0,0276	19	687
69	Moldova	97,32	3,0	0,0440	30	681
70	Serbia	100,86	6,7	0,1744	118	677
71	Mongolia	102,86	3,5	0,1232	75	609
72	Morocco	96,78	38,5	0,5156	310	601
73	Bahrain	94,04	1,7	0,0140	8	570
74	Philippines	96,66	117,0	1,5349	786	512
75	Uruguay	95,01	3,4	0,0334	15	449
76	Vietnam	100,12	101,7	2,3580	991	420
77	Costa Rica	94,15	5,2	0,0438	18	411
78	Zimbabwe	90,21	17,0	0,0679	27	398
79	Thailand	101,52	71,6	2,0624	752	365
80	Sri Lanka	102,02	23,3	0,7239	185	256
81	Peru	99,37	34,6	0,7119	179	251
82	Pakistan	93,25	256,1	1,8293	459	251
83	Ecuador	95,00	18,3	0,1796	41	228
84	Mozambique	87,81	35,9	0,0882	18	204
85	Mauritius	96,89	1,3	0,0177	3	169
86	Jordan	96,71	11,5	0,1522	21	138
87	Cuba	96,02	10,9	0,1280	17	133
88	Cyprus	98,51	1,4	0,0251	3	120
89	Armenia	102,58	2,9	0,0979	11	112
90	Dominican	90,06	11,5	0,0446	4	90

	Republic					
91	Venezuela	91,02	28,5	0,1334	9	67
92	Guatemala	91,29	18,7	0,0922	4	43
93	Ghana	90,25	35,2	0,1417	6	42
94	Yemen	93,30	42,0	0,3028	11	36
95	Ethiopia	95,09	136,3	1,3594	44	32
96	Bangladesh	96,46	176,2	2,2335	67	30
97	Laos	92,05	7,9	0,0451	1	22
98	Cambodia	93,97	17,9	0,1459	1	7

Table 13. Top-2 countries with populations of 400 million and above by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	China	107,19	1415,3	90,8223	1522292	16761	100,0
2	India	99,08	1466,9	28,8034	49860	1731	10,3

Table 14. Top-11 countries with populations from 100 to 400 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	USA	99,74	347,7	7,5904	275897	36348	100,0
2	Japan	106,40	122,9	7,1062	228936	32216	88,6
3	Russia	103,16	143,8	5,2890	20623	3899	10,7
4	Brazil	92,92	213,0	1,4309	4973	3475	9,6
5	Indonesia	93,18	286,2	2,0179	1682	834	2,3
6	Mexico	95,51	132,2	1,4202	978	689	1,9
7	Philippines	96,66	117,0	1,5349	786	512	1,4
8	Vietnam	100,12	101,7	2,3580	991	420	1,2
9	Pakistan	93,25	256,1	1,8293	459	251	0,7
10	Ethiopia	95,09	136,3	1,3594	44	32	0,1
11	Bangladesh	96,46	176,2	2,2335	67	30	0,1

Table 15. Top-26 countries with populations from 30 to 100 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	South Korea	106,43	51,6	2,9955	191142	63809	100,0
2	Germany	99,64	83,9	1,8026	38489	21352	33,5
3	Saudi Arabia	93,95	34,7	0,2819	2819	10001	15,7
4	United Kingdom	99,68	69,6	1,5049	11487	7633	12,0
5	France	101,42	66,7	1,8922	13602	7189	11,3
6	Italy	100,84	59,0	1,5309	8478	5538	8,7
7	Poland	99,35	38,0	0,7794	3946	5063	7,9
8	Turkey	99,07	87,7	1,7193	8429	4903	7,7
9	Canada	101,65	40,2	1,1810	4097	3469	5,4
10	Ukraine	95,38	39,3	0,4126	1010	2448	3,8
11	Algeria	97,01	47,6	0,6629	1396	2106	3,3
12	Iraq	93,99	47,2	0,3862	727	1882	2,9
13	Iran	106,3	92,6	5,2831	8503	1609	2,5
14	Kenya	91,22	57,8	0,2812	360	1280	2,0
15	Argentina	94,39	45,9	0,4038	421	1042	1,6
16	Uzbekistan	96,79	37,2	0,4990	518	1038	1,6
17	Malaysia	100,48	36,1	0,8857	843	952	1,5
18	South Africa	94,11	64,9	0,5428	413	761	1,2
19	Spain	102,3	47,9	1,5518	1149	740	1,2
20	Colombia	93,17	53,6	0,3772	266	705	1,1
21	Morocco	96,78	38,5	0,5156	310	601	0,9
22	Thailand	101,52	71,6	2,0624	752	365	0,6
23	Peru	99,37	34,6	0,7119	179	251	0,4
24	Mozambique	87,81	35,9	0,0882	18	204	0,3
25	Ghana	90,25	35,2	0,1417	6	42	0,1
26	Yemen	93,30	42,0	0,3028	11	36	0,1

Table 16. Top-20 countries with populations from 10 to 30 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	Sweden	98,49	10,7	0,1908	1857	9731	100,0
2	Netherlands	99,72	18,4	0,4004	1819	4543	46,7

3	Romania	96,31	18,9	0,2335	817	3500	36,0
4	Portugal	99,34	10,4	0,2130	719	3376	34,7
5	Australia	102,57	27,0	0,9106	2511	2758	28,3
6	Belgium	100,11	11,8	0,2732	716	2621	26,9
7	Kazakhstan	97,17	20,9	0,2991	693	2317	23,8
8	Czech Republic	99,73	10,6	0,2310	465	2013	20,7
9	Chile	95,38	19,9	0,2089	395	1890	19,4
10	Azerbaijan	98,71	10,4	0,1923	201	1045	10,7
11	UAE	96,80	11,4	0,1532	144	940	9,7
12	Zimbabwe	90,21	17,0	0,0679	27	398	4,1
13	Sri Lanka	102,02	23,3	0,7239	185	256	2,6
14	Ecuador	95,00	18,3	0,1796	41	228	2,3
15	Jordan	96,71	11,5	0,1522	21	138	1,4
16	Cuba	96,02	10,9	0,1280	17	133	1,4
17	Dominican Republic	90,06	11,5	0,0446	4	90	0,9
18	Venezuela	91,02	28,5	0,1334	9	67	0,7
19	Guatemala	91,29	18,7	0,0922	4	43	0,4
20	Cambodia	93,97	17,9	0,1459	1	7	0,1

Table 17. Top-26 countries with populations from 3 to 10 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	Finland	100,30	5,6	0,1336	1672	12518	100,0
2	Denmark	97,94	6,0	0,0977	1078	11032	88,1
3	Austria	99,65	9,1	0,1958	1777	9074	72,5
4	Norway	98,52	5,6	0,1004	815	8120	64,9
5	Israel	99,07	9,5	0,1862	1435	7705	61,6
6	Singapore	105,14	5,9	0,2875	1621	5639	45,0
7	Switzerland	100,75	9,0	0,2303	1190	5167	41,3
8	Greece	100,07	9,9	0,2277	499	2191	17,5
9	Croatia	99,17	3,8	0,0757	164	2166	17,3
10	Slovakia	99,76	5,4	0,1183	232	1962	15,7
11	Qatar	94,77	3,1	0,0292	57	1952	15,6
12	Hungary	99,46	9,6	0,2004	383	1911	15,3
13	New Zealand	102,08	5,3	0,1661	310	1866	14,9
14	Bulgaria	97,79	6,7	0,1064	185	1738	13,9
15	Oman	94,08	5,5	0,0457	55	1202	9,6
16	Georgia	100,59	3,8	0,0948	96	1012	8,1
17	Belarus	101,47	9,0	0,2573	256	995	7,9
18	Ireland	98,32	5,3	0,0919	90	979	7,8

19	Kyrgyzstan	94,85	7,3	0,0698	67	960	7,7
20	Bosnia and Herzegovina	97,62	3,1	0,0479	44	919	7,3
21	Moldova	97,32	3,0	0,0440	30	681	5,4
22	Serbia	100,86	6,7	0,1744	118	677	5,4
23	Mongolia	102,86	3,5	0,1232	75	609	4,9
24	Uruguay	95,01	3,4	0,0334	15	449	3,6
25	Costa Rica	94,15	5,2	0,0438	18	411	3,3
26	Laos	92,05	7,9	0,0451	1	22	0,2

Table 18. Top-9 countries with populations from 1 to 3 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	Latvia	98,84	1,8	0,0340	140	4118	100,0
2	Slovenia	101,96	2,1	0,0647	139	2150	52,2
3	Lithuania	98,67	2,8	0,0514	66	1283	31,2
4	Estonia	99,39	1,3	0,0268	25	932	22,6
5	North Macedonia	97,59	1,8	0,0276	19	687	16,7
6	Bahrain	94,04	1,7	0,0140	8	570	13,8
7	Mauritius	96,89	1,3	0,0177	3	169	4,1
8	Cyprus	98,51	1,4	0,0251	3	120	2,9
9	Armenia	102,58	2,9	0,0979	11	112	2,7

Table 19. Top 4 countries with a population of up to 1 million people by the use of intellectual potential in technology in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of patents [12]	Usage intellectual potential in technology, UIPS (patents) , patents per million people	Relative percentage, %
1	Luxembourg	100,00	0,7	0,0159	106	6656	100,0
2	Iceland	99,99	0,4	0,0091	21	2311	34,7
3	Montenegro	98,65	0,6	0,0110	8	728	10,9
4	Malta	99,19	0,5	0,0100	7	700	10,5

**§12. Top 111 countries by intellectual potential in music in 2024**

Table 20 compares 111 countries with each other, and Tables 21, 22, 23, 24, 25, 26, and 27 compare countries with similar population sizes.

Table 20. Top-111 countries by intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people.
1	Iceland	99,99	0,4	0,009	441	48538,1
2	Netherlands	99,72	18,4	0,400	13163	32874,6
3	Estonia	99,39	1,3	0,027	726	27054,7
4	Greece	100,07	9,9	0,228	5629	24717,7
5	United Kingdom	99,68	69,6	1,505	32488	21587,7
6	Denmark	97,94	6,0	0,098	1862	19055,9
7	Finland	100,30	5,6	0,134	2516	18836,6
8	Norway	98,52	5,6	0,100	1809	18023,4
9	North Macedonia	97,59	1,8	0,028	483	17469,1
10	Sweden	98,49	10,7	0,191	2972	15573,7
11	Germany	99,64	83,9	1,803	23860	13236,5
12	Belgium	100,11	11,8	0,273	3593	13153,6
13	Portugal	99,34	10,4	0,213	1997	9377,4
14	Lithuania	98,67	2,8	0,051	465	9040,9
15	Malta	99,19	0,5	0,010	90	9005,5
16	Ireland	98,32	5,3	0,092	808	8790,4
17	Hungary	99,46	9,6	0,200	1646	8213,5
18	Italy	100,84	59,0	1,531	12563	8206,2
19	Switzerland	100,75	9,0	0,230	1864	8094,1
20	USA	99,74	347,7	7,590	58473	7703,6
21	Czech Republic	99,73	10,6	0,231	1696	7340,9
22	Slovenia	101,96	2,1	0,065	469	7253,9
23	Latvia	98,84	1,8	0,034	240	7060,2
24	Austria	99,65	9,1	0,196	1230	6281,1
25	France	101,42	66,7	1,892	11080	5855,7
26	Poland	99,35	38,0	0,779	4476	5743,1
27	Spain	102,30	47,9	1,552	8070	5200,2
28	Croatia	99,17	3,8	0,076	378	4992,8
29	Australia	102,57	27,0	0,911	4187	4598,2
30	Canada	101,65	40,2	1,181	5332	4514,7

31	Luxembourg	100,00	0,7	0,016	70	4395,6
32	Chile	95,38	19,9	0,209	879	4206,9
33	Puerto Rico	90,94	3,2	0,015	61	4137,6
34	Slovakia	99,76	5,4	0,118	469	3965,9
35	Bulgaria	97,79	6,7	0,106	414	3890,3
36	Romania	96,31	18,9	0,2335	879	3765,2
37	Uruguay	95,01	3,4	0,033	124	3709,1
38	Ukraine	95,38	39,3	0,413	1409	3414,7
39	New Zealand	102,08	5,3	0,166	505	3039,5
40	Moldova	97,32	3,0	0,044	123	2793,3
41	Argentina	94,39	45,9	0,404	1069	2647,1
42	Serbia	100,86	6,7	0,174	448	2569,0
43	Israel	99,07	9,5	0,1862	403	2163,9
44	Costa Rica	94,15	5,2	0,044	86	1963,2
45	Colombia	93,17	53,6	0,377	689	1826,5
46	Brazil	92,92	213,0	1,431	2393	1672,3
47	Japan	106,40	122,9	7,106	10766	1515,0
48	Mexico	95,51	132,2	1,420	2030	1429,4
49	Cyprus	98,51	1,4	0,025	32	1277,4
50	Russia	103,16	143,8	5,289	6441	1217,8
51	Montenegro	98,65	0,6	0,011	13	1183,4
52	Georgia	100,59	3,8	0,095	112	1180,9
53	Bolivia	92,76	12,6	0,082	96	1168,5
54	Panama	90,49	4,6	0,019	21	1082,0
55	Belarus	101,47	9,0	0,257	169	656,9
56	Singapore	105,14	5,9	0,287	169	587,9
57	Indonesia	93,18	286,2	2,018	975	483,2
58	South Korea	106,43	51,6	2,996	1294	432,0
59	Kazakhstan	97,17	20,9	0,299	121	404,6
60	Ecuador	95,00	18,3	0,180	69	384,1
61	Malaysia	100,48	36,1	0,886	339	382,8
62	Turkey	99,07	87,7	1,719	563	327,5
63	Dominican Republic	90,06	11,5	0,045	14	314,1
64	South Africa	94,11	64,9	0,543	170	313,2
65	Paraguay	90,76	7,0	0,031	9	289,0
66	Peru	99,37	34,6	0,712	195	273,9
67	Bosnia and Herzegovina	97,62	3,1	0,048	12	250,7
68	Venezuela	91,02	28,5	0,133	32	239,9
69	Uganda	89,89	51,7	0,194	46	237,4
70	Guatemala	91,29	18,7	0,092	21	227,8
71	Armenia	102,58	2,9	0,098	22	224,6
72	El Salvador	91,07	6,3	0,030	6	201,6
73	Albania	97,19	2,8	0,040	7	174,1
74	UAE	96,80	11,4	0,153	24	156,7

75	Mongolia	102,86	3,5	0,123	19	154,2
76	Tunisia	97,51	12,4	0,188	28	149,0
77	Lebanon	99,39	5,9	0,122	18	147,8
78	Philippines	96,66	117,0	1,535	196	127,7
79	Taiwan	107,10	23,0	1,4587	184	126,1
80	Nicaragua	88,70	7,0	0,021	2	96,9
81	Jordan	96,71	11,5	0,152	14	92,0
82	Bahrain	94,04	1,7	0,014	1	71,2
83	Honduras	90,53	11,0	0,047	3	64,1
84	Republic of the Congo	88,01	6,5	0,017	1	60,1
85	Thailand	101,52	71,6	2,062	122	59,2
86	Laos	92,05	7,9	0,045	2	44,4
87	Kenya	91,22	57,8	0,281	11	39,1
88	Cuba	96,02	10,9	0,128	5	39,1
89	Senegal	88,27	19,0	0,051	2	39,0
90	Angola	85,33	39,3	0,057	2	35,1
91	Qatar	94,77	3,1	0,029	1	34,2
92	Zimbabwe	90,21	17,0	0,068	2	29,5
93	Ghana	90,25	35,2	0,142	4	28,2
94	Azerbaijan	98,71	10,4	0,192	5	26,0
95	Democratic Republic of the Congo	88,01	113,6	0,291	7	24,1
96	Nigeria	91,35	238,7	1,191	24	20,2
97	Vietnam	100,12	101,7	2,358	43	18,2
98	India	99,08	1466,9	28,803	436	15,1
99	Morocco	96,78	38,5	0,516	7	13,6
100	Iraq	93,99	47,2	0,386	4	10,4
101	China	107,19	1415,3	90,8223	849	9,3
102	Iran	106,30	92,6	5,283	47	8,9
103	Sri Lanka	102,02	23,3	0,724	6	8,3
104	Ethiopia	95,09	136,3	1,359	11	8,1
105	Saudi Arabia	93,95	34,7	0,282	2	7,1
106	Egypt	97,21	118,7	1,710	12	7,0
107	Madagascar	94,80	32,9	0,312	2	6,4
108	Uzbekistan	96,79	37,2	0,499	3	6,0
109	Algeria	97,01	47,6	0,663	3	4,5
110	Pakistan	93,25	256,1	1,829	7	3,8
111	Bangladesh	96,46	176,2	2,233	6	2,7

Table 21. Top-2 countries with populations of 400 million and above by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	India	99,08	1466,9	28,803	436	15,1	100,00
2	China	107,19	1415,3	90,8223	849	9,3	61,76

Table 22. Top-14 countries with populations from 100 to 400 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	USA	99.74	347.7	7,590	58473	7703.6	100.00
2	Japan	106.40	122.9	7,106	10766	1515.0	19.67
3	Mexico	95.51	132.2	1,420	2030	1429.4	18.55
4	Russia	103.16	143.8	5,289	6441	1217.8	15.81
5	Indonesia	93.18	286.2	2,018	975	483.2	6.27
6	Brazil	92.92	213.0	1.4309	384.09	268.4	3.48
7	Philippines	96.66	117.0	1,535	196	127.7	1.66
8	Democratic Republic of the Congo	88.01	113.6	0.291	7	24.1	0.31
9	Nigeria	91.35	238.7	1,191	24	20.2	0.26
10	Vietnam	100.12	101.7	2,358	43	18.2	0.24
11	Ethiopia	95.09	136.3	1,359	11	8.1	0.11
12	Egypt	97.21	118.7	1,710	12	7.0	0.09
13	Pakistan	93.25	256.1	1,829	7	3.8	0.05
14	Bangladesh	96.46	176.2	2,233	6	2.7	0.03

Table 23. Top-27 countries with populations from 300 to 100 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	United Kingdom	99,68	69,6	1,505	32488	21587,7	100,00
2	Germany	99,64	83,9	1,803	23860	13236,5	61,31
3	Italy	100,84	59,0	1,531	12563	8206,2	38,01
4	France	101,42	66,7	1,892	11080	5855,7	27,13
5	Poland	99,35	38,0	0,779	4476	5743,1	26,60
6	Spain	102,30	47,9	1,552	8070	5200,2	24,09
7	Canada	101,65	40,2	1,181	5332	4514,7	20,91
8	Ukraine	95,38	39,3	0,413	1409	3414,7	15,82
9	Argentina	94,39	45,9	0,404	1069	2647,1	12,26
10	Colombia	93,17	53,6	0,377	689	1826,5	8,46
11	South Korea	106,43	51,6	2,996	1294	432,0	2,00
12	Malaysia	100,48	36,1	0,886	339	382,8	1,77
13	Turkey	99,07	87,7	1,719	563	327,5	1,52
14	South Africa	94,11	64,9	0,543	170	313,2	1,45
15	Peru	99,37	34,6	0,712	195	273,9	1,27
16	Uganda	89,89	51,7	0,194	46	237,4	1,10
17	Thailand	101,52	71,6	2,062	122	59,2	0,27
18	Kenya	91,22	57,8	0,281	11	39,1	0,18
19	Angola	85,33	39,3	0,057	2	35,1	0,16
20	Ghana	90,25	35,2	0,142	4	28,2	0,13
21	Morocco	96,78	38,5	0,516	7	13,6	0,06
22	Iraq	93,99	47,2	0,386	4	10,4	0,05
23	Iran	106,30	92,6	5,283	47	8,9	0,04
24	Saudi Arabia	93,95	34,7	0,282	2	7,1	0,03
25	Madagascar	94,80	32,9	0,312	2	6,4	0,03
26	Uzbekistan	96,79	37,2	0,499	3	6,0	0,03
27	Algeria	97,01	47,6	0,663	3	4,5	0,02

Table 24. Top-24 countries with populations from 10 to 30 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	Netherlands	99,72	18,4	0,400	13163	32874,6	100,00

2	Sweden	98,49	10,7	0,191	2972	15573,7	47,37
3	Belgium	100,11	11,8	0,273	3593	13153,6	40,01
4	Portugal	99,34	10,4	0,213	1997	9377,4	28,52
5	Czech Republic	99,73	10,6	0,231	1696	7340,9	22,33
6	Australia	102,57	27,0	0,911	4187	4598,2	13,99
7	Chile	95,38	19,9	0,209	879	4206,9	12,80
8	Romania	96,31	18,9	0,2335	879	3765,2	11,45
9	Bolivia	92,76	12,6	0,082	96	1168,5	3,55
10	Kazakhstan	97,17	20,9	0,299	121	404,6	1,23
11	Ecuador	95,00	18,3	0,180	69	384,1	1,17
12	Dominican Republic	90,06	11,5	0,045	14	314,1	0,96
13	Venezuela	91,02	28,5	0,133	32	239,9	0,73
14	Guatemala	91,29	18,7	0,092	21	227,8	0,69
15	UAE	96,80	11,4	0,153	24	156,7	0,48
16	Tunisia	97,51	12,4	0,188	28	149,0	0,45
17	Taiwan	107,10	23,0	1,4587	184	126,1	0,38
18	Jordan	96,71	11,5	0,152	14	92,0	0,28
19	Honduras	90,53	11,0	0,047	3	64,1	0,20
20	Cuba	96,02	10,9	0,128	5	39,1	0,12
21	Senegal	88,27	19,0	0,051	2	39,0	0,12
22	Zimbabwe	90,21	17,0	0,068	2	29,5	0,09
23	Azerbaijan	98,71	10,4	0,192	5	26,0	0,08
24	Sri Lanka	102,02	23,3	0,724	6	8,3	0,03

Table 25. Top-31 countries with populations from 3 to 10 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	Greece	100,07	9,9	0,228	5629	24717,7	100,00
2	Denmark	97,94	6,0	0,098	1862	19055,9	77,09
3	Finland	100,30	5,6	0,134	2516	18836,6	76,21
4	Norway	98,52	5,6	0,100	1809	18023,4	72,92
5	Ireland	98,32	5,3	0,092	808	8790,4	35,56
6	Hungary	99,46	9,6	0,200	1646	8213,5	33,23
7	Switzerland	100,75	9,0	0,230	1864	8094,1	32,75
8	Austria	99,65	9,1	0,196	1230	6281,1	25,41
9	Croatia	99,17	3,8	0,076	378	4992,8	20,20
10	Puerto Rico	90,94	3,2	0,015	61	4137,6	16,74
11	Slovakia	99,76	5,4	0,118	469	3965,9	16,04
12	Bulgaria	97,79	6,7	0,106	414	3890,3	15,74
13	Uruguay	95,01	3,4	0,033	124	3709,1	15,01
14	New Zealand	102,08	5,3	0,166	505	3039,5	12,30

15	Moldova	97,32	3,0	0,044	123	2793,3	11,30
16	Serbia	100,86	6,7	0,174	448	2569,0	10,39
17	Israel	99,07	9,5	0,1862	403	2163,9	8,75
18	Costa Rica	94,15	5,2	0,044	86	1963,2	7,94
19	Georgia	100,59	3,8	0,095	112	1180,9	4,78
20	Panama	90,49	4,6	0,019	21	1082,0	4,38
21	Belarus	101,47	9,0	0,257	169	656,9	2,66
22	Singapore	105,14	5,9	0,287	169	587,9	2,38
23	Paraguay	90,76	7,0	0,031	9	289,0	1,17
24	Bosnia and Herzegovina	97,62	3,1	0,048	12	250,7	1,01
25	Salvador	91,07	6,3	0,030	6	201,6	0,82
26	Mongolia	102,86	3,5	0,123	19	154,2	0,62
27	Lebanon	99,39	5,9	0,122	18	147,8	0,60
28	Nicaragua	88,70	7,0	0,021	2	96,9	0,39
29	Republic of the Congo	88,01	6,5	0,017	1	60,1	0,24
30	Laos	92,05	7,9	0,045	2	44,4	0,18
31	Qatar	94,77	3,1	0,029	1	34,2	0,14

Table 26. Top-9 countries with populations from 1 to 3 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases per million people	Relative percentage, %
1	Estonia	99,39	1,3	0,027	726	27054,7	100,00
2	North Macedonia	97,59	1,8	0,028	483	17469,1	64,57
3	Lithuania	98,67	2,8	0,051	465	9040,9	33,42
4	Slovenia	101,96	2,1	0,065	469	7253,9	26,81
5	Latvia	98,84	1,8	0,034	240	7060,2	26,10
6	Cyprus	98,51	1,4	0,025	32	1277,4	4,72
7	Armenia	102,58	2,9	0,098	22	224,6	0,83
8	Albania	97,19	2,8	0,040	7	174,1	0,64
9	Bahrain	94,04	1,7	0,014	1	71,2	0,26

Table 27. Top-4 countries with a population of up to 1 million people by the use of intellectual potential in music in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of music releases [7]	Using intellectual potential in music, UIPS (music), releases	Relative percentage, %
1	Estonia	99,39	1,3	0,027	726	27054,7	100,00
2	North Macedonia	97,59	1,8	0,028	483	17469,1	64,57
3	Lithuania	98,67	2,8	0,051	465	9040,9	33,42
4	Slovenia	101,96	2,1	0,065	469	7253,9	26,81

				3)		per million people	
1	Iceland	99,99	0,4	0,009	441	48538,1	100,00
2	Malta	99,19	0,5	0,010	90	9005,5	18,55
3	Luxembourg	100,00	0,7	0,016	70	4395,6	9,06
4	Montenegro	98,65	0,6	0,011	13	1183,4	2,44

### **§13. Top 102 countries by intellectual potential in cinematography in 2024**

Table 28 compares 102 countries with each other, and Tables 29, 30, 31, 32, 33, 34, and 35 compare countries with similar population sizes.

Table 28. Top-102 countries in the world by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people
1	Iceland	99,99	0,4	0,009	7	770,45
2	Luxembourg	100,00	0,7	0,016	11	690,74
3	Ireland	98,32	5,3	0,092	37	402,53
4	Line up	94,77	3,1	0,029	9	308,19
5	Denmark	97,94	6,0	0,098	30	307,02
6	Norway	98,52	5,6	0,100	30	298,90
7	Portugal	99,34	10,4	0,213	57	267,66
8	Finland	100,30	5,6	0,134	33	247,06
9	France	101,42	66,7	1,892	425	224,61
10	Czech Republic	99,73	10,6	0,231	50	216,42
11	Sweden	98,49	10,7	0,191	40	209,61
12	Slovakia	99,76	5,4	0,118	23	194,49
13	UK	99,68	69,6	1,505	282	187,38
14	Romania	96,31	18,9	0,233	43	184,19
15	Belgium	100,11	11,8	0,273	48	175,72
16	New Zealand	102,08	5,3	0,166	28	168,53
17	Croatia	99,17	3,8	0,076	12	158,50
18	Panama	90,49	4,6	0,019	3	154,57
19	Spain	102,30	47,9	1,552	239	154,01
20	Estonia	99,39	1,3	0,027	4	149,06
21	USA	99,74	347,7	7,590	1119	147,42
22	Netherlands	99,72	18,4	0,400	59	147,35
23	Italy	100,84	59,0	1,531	219	143,05
24	Switzerland	100,75	9,0	0,230	29	125,93
25	Germany	99,64	83,9	1,803	223	123,71
26	Canada	101,65	40,2	1,181	144	121,93

27	Turkey	99,07	87,7	1,719	207	120,40
28	Latvia	98,84	1,8	0,034	4	117,67
29	Dominican Republic	90,06	11,5	0,045	5	112,17
30	Australia	102,57	27,0	0,911	98	107,63
31	Malta	99,19	0,5	0,010	1	100,06
32	Austria	99,65	9,1	0,196	19	97,02
33	Montenegro	98,65	0,6	0,011	1	91,03
34	Brazil	92,92	213,0	1,431	129	90,15
35	Hungary	99,46	9,6	0,200	18	89,82
36	South Korea	106,43	51,6	2,996	261	87,13
37	Cyprus	98,51	1,4	0,025	2	79,84
38	Serbia	100,86	6,7	0,174	13	74,55
39	Argentina	94,39	45,9	0,404	28	69,33
40	Puerto Rico	90,94	3,2	0,015	1	67,83
41	Bulgaria	97,79	6,7	0,106	7	65,78
42	Bosnia and Herzegovina	97,62	3,1	0,048	3	62,69
43	Chile	95,38	19,9	0,209	13	62,22
44	Israel	99,07	9,5	0,186	11	59,06
45	Senegal	88,27	19,0	0,051	3	58,45
46	Lithuania	98,67	2,8	0,051	3	58,33
47	Mexico	95,51	132,2	1,420	72	50,70
48	Costa Rica	94,15	5,2	0,044	2	45,66
49	Greece	100,07	9,9	0,228	10	43,91
50	Poland	99,35	38,0	0,779	34	43,63
51	South Africa	94,11	64,9	0,543	19	35,01
52	El Salvador	91,07	6,3	0,030	1	33,59
53	Russia	103,16	143,8	5,289	174	32,90
54	Paraguay	90,76	7,0	0,031	1	32,11
55	Singapore	105,14	5,9	0,287	9	31,31
56	Slovenia	101,96	2,1	0,065	2	30,93
57	Uruguay	95,01	3,4	0,033	1	29,91
58	Nepal	97,07	29,6	0,416	12	28,81
59	Saudi Arabia	93,95	34,7	0,282	8	28,38
60	Togo	89,94	9,8	0,037	1	26,96
61	Colombia	93,17	53,6	0,377	9	23,86
62	Moldova	97,32	3,0	0,044	1	22,71
63	Georgia	100,59	3,8	0,095	2	21,09
64	Indonesia	93,18	286,2	2,018	42	20,81
65	Japan	106,40	122,9	7,106	146	20,55
66	Kuwait	95,02	5,0	0,049	1	20,30
67	Kazakhstan	97,17	20,9	0,299	6	20,06
68	Cameroon	89,94	30,0	0,114	2	17,61
69	Angola	85,33	39,3	0,057	1	17,54
70	Lebanon	99,39	5,9	0,122	2	16,42

71	Mongolia	102,86	3,5	0,123	2	16,23
72	Taiwan	107,10	23,0	1,4587	22	15,08
73	Ukraine	95,38	39,3	0,413	6	14,54
74	Kyrgyzstan	94,85	7,3	0,070	1	14,33
75	Cambodia	93,97	17,9	0,146	2	13,70
76	Jordan	96,71	11,5	0,152	2	13,14
77	UAE	96,80	11,4	0,153	2	13,06
78	India	99,08	1466,9	28,803	336	11,67
79	Morocco	96,78	38,5	0,516	6	11,64
80	Philippines	96,66	117,0	1,535	17	11,08
81	Guatemala	91,29	18,7	0,092	1	10,85
82	Thailand	101,52	71,6	2,062	22	10,67
83	Armenia	102,58	2,9	0,098	1	10,21
84	Malaysia	100,48	36,1	0,886	7	7,90
85	Cuba	96,02	10,9	0,128	1	7,81
86	Nigeria	91,35	238,7	1,191	9	7,56
87	Kenya	91,22	57,8	0,281	2	7,11
88	Ghana	90,25	35,2	0,142	1	7,06
89	Yemen	93,30	42,0	0,303	2	6,61
90	Pakistan	93,25	256,1	1,829	12	6,56
91	Peru	99,37	34,6	0,712	4	5,62
92	Tunisia	97,51	12,4	0,188	1	5,32
93	Vietnam	100,12	101,7	2,358	12	5,09
94	Egypt	97,21	118,7	1,710	8	4,68
95	China	107,19	1415,3	90,822	415	4,57
96	Tanzania	89,40	71,0	0,241	1	4,14
97	Belarus	101,47	9,0	0,257	1	3,89
98	Madagascar	94,80	32,9	0,312	1	3,21
99	Sri Lanka	102,02	23,3	0,724	2	2,76
100	Bangladesh	96,46	176,2	2,233	5	2,24
101	Iran	106,30	92,6	5,283	9	1,70
102	Algeria	97,01	47,6	0,663	1	1,51

Table 29. Top-2 countries with a population of 400 million people in terms of the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	India	99,08	1466,9	28,803	336	11,67	100,0
2	China	107,19	1415,3	90,822	415	4,57	39,2

Table 30. Top-12 countries with populations from 100 to 400 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ over 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	USA	99,74	347,7	7,590	1119	147,42	100,0
2	Brazil	92,92	213,0	1,431	129	90,15	61,2
3	Mexico	95,51	132,2	1,420	72	50,70	34,4
4	Russia	103,16	143,8	5,289	174	32,90	22,3
5	Indonesia	93,18	286,2	2,018	42	20,81	14,1
6	Japan	106,40	122,9	7,106	146	20,55	13,9
7	Philippines	96,66	117,0	1,535	17	11,08	7,5
8	Nigeria	91,35	238,7	1,191	9	7,56	5,1
9	Pakistan	93,25	256,1	1,829	12	6,56	4,4
10	Vietnam	100,12	101,7	2,358	12	5,09	3,5
11	Egypt	97,21	118,7	1,710	8	4,68	3,2
12	Bangladesh	96,46	176,2	2,233	5	2,24	1,5

Table 31. Top-27 countries with populations from 30 to 100 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ more than 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	France	101.42	66.7	1,892	425	224.61	100.0
2	United Kingdom	99.68	69.6	1,505	282	187.38	83.4
3	Spain	102.30	47.9	1,552	239	154.01	68.6
4	Italy	100.84	59.0	1,531	219	143.05	63.7
5	Germany	99.64	83.9	1,803	223	123.71	55.1
6	Canada	101.65	40.2	1,181	144	121.93	54.3
7	Turkey	99.07	87.7	1,719	207	120.40	53.6
8	South Korea	106.43	51.6	2,996	261	87.13	38.8
9	Argentina	94.39	45.9	0.404	28	69.33	30.9
10	Poland	99.35	38.0	0.779	34	43.63	19.4
11	South Africa	94.11	64.9	0.543	19	35.01	15.6
12	Saudi Arabia	93.95	34.7	0.282	8	28.38	12.6
13	Colombia	93.17	53.6	0.377	9	23.86	10.6
14	Cameroon	89.94	30.0	0.114	2	17.61	7.8
15	Angola	85.33	39.3	0.057	1	17.54	7.8
16	Ukraine	95.38	39.3	0.413	6	14.54	6.5
17	Morocco	96.78	38.5	0.516	6	11.64	5.2

18	Thailand	101.52	71.6	2,062	22	10.67	4.7
19	Malaysia	100.48	36.1	0.886	7	7.90	3.5
20	Kenya	91.22	57.8	0.281	2	7.11	3.2
21	Ghana	90.25	35.2	0.142	1	7.06	3.1
22	Yemen	93.30	42.0	0.303	2	6.61	2.9
23	Peru	99.37	34.6	0.712	4	5.62	2.5
24	Tanzania	89.40	71.0	0.241	1	4.14	1.8
25	Madagascar	94.80	32.9	0.312	1	3.21	1.4
26	Iran	106.30	92.6	5,283	9	1.70	0.8
27	Algeria	97.01	47.6	0.663	1	1.51	0.7

Table 32. Top 20 countries with populations from 10 to 30 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ more than 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	Portugal	99,34	10,4	0,213	57	267,66	100,0
2	Czech Republic	99,73	10,6	0,231	50	216,42	80,9
3	Sweden	98,49	10,7	0,191	40	209,61	78,3
4	Romania	96,31	18,9	0,233	43	184,19	68,8
5	Belgium	100,11	11,8	0,273	48	175,72	65,7
6	Netherlands	99,72	18,4	0,400	59	147,35	55,1
7	Dominican Republic	90,06	11,5	0,045	5	112,17	41,9
8	Australia	102,57	27,0	0,911	98	107,63	40,2
9	Chile	95,38	19,9	0,209	13	62,22	23,2
10	Senegal	88,27	19,0	0,051	3	58,45	21,8
11	Nepal	97,07	29,6	0,416	12	28,81	10,8
12	Kazakhstan	97,17	20,9	0,299	6	20,06	7,5
13	Taiwan	107,10	23,0	1,4587	22	15,08	5,6
14	Cambodia	93,97	17,9	0,146	2	13,70	5,1
15	Jordan	96,71	11,5	0,152	2	13,14	4,9
16	UAE	96,80	11,4	0,153	2	13,06	4,9
17	Guatemala	91,29	18,7	0,092	1	10,85	4,1
18	Cuba	96,02	10,9	0,128	1	7,81	2,9
19	Tunisia	97,51	12,4	0,188	1	5,32	2,0
20	Sri Lanka	102,02	23,3	0,724	2	2,76	1,0

Table 33. Top-31 countries with populations of 3 to 10 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4 ]	Intellectual potential of the country IPS , million people with IQ more than 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	Ireland	98,32	5,3	0,092	37	402,53	100,0
2	Qatar	94,77	3,1	0,029	9	308,19	76,6
3	Denmark	97,94	6,0	0,098	30	307,02	76,3
4	Norway	98,52	5,6	0,100	30	298,90	74,3
5	Finland	100,30	5,6	0,134	33	247,06	61,4
6	Slovakia	99,76	5,4	0,118	23	194,49	48,3
7	New Zealand	102,08	5,3	0,166	28	168,53	41,9
8	Croatia	99,17	3,8	0,076	12	158,50	39,4
9	Panama	90,49	4,6	0,019	3	154,57	38,4
10	Switzerland	100,75	9,0	0,230	29	125,93	31,3
11	Austria	99,65	9,1	0,196	19	97,02	24,1
12	Hungary	99,46	9,6	0,200	18	89,82	22,3
13	Serbia	100,86	6,7	0,174	13	74,55	18,5
14	Puerto Rico	90,94	3,2	0,015	1	67,83	16,9
15	Bulgaria	97,79	6,7	0,106	7	65,78	16,3
16	Bosnia and Herzegovina	97,62	3,1	0,048	3	62,69	15,6
17	Israel	99,07	9,5	0,186	11	59,06	14,7
18	Costa Rica	94,15	5,2	0,044	2	45,66	11,3
19	Greece	100,07	9,9	0,228	10	43,91	10,9
20	El Salvador	91,07	6,3	0,030	1	33,59	8,3
21	Paraguay	90,76	7,0	0,031	1	32,11	8,0
22	Singapore	105,14	5,9	0,287	9	31,31	7,8
23	Uruguay	95,01	3,4	0,033	1	29,91	7,4
24	Togo	89,94	9,8	0,037	1	26,96	6,7
25	Moldova	97,32	3,0	0,044	1	22,71	5,6
26	Georgia	100,59	3,8	0,095	2	21,09	5,2
27	Kuwait	95,02	5,0	0,049	1	20,30	5,0
28	Lebanon	99,39	5,9	0,122	2	16,42	4,1
29	Mongolia	102,86	3,5	0,123	2	16,23	4,0
30	Kyrgyzstan	94,85	7,3	0,070	1	14,33	3,6
31	Belarus	101,47	9,0	0,257	1	3,89	1,0

Table 34. Top-6 countries with populations from 1 to 3 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ more than 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	Estonia	99,39	1,3	0,027	4	149,06	100,0
2	Latvia	98,84	1,8	0,034	4	117,67	78,9
3	Cyprus	98,51	1,4	0,025	2	79,84	53,6
4	Lithuania	98,67	2,8	0,051	3	58,33	39,1
5	Slovenia	101,96	2,1	0,065	2	30,93	20,8
6	Armenia	102,58	2,9	0,098	1	10,21	6,8

Table 35. Top-4 countries with a population of up to 1 million people by the use of intellectual potential in cinematography in 2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS, million people with IQ more than 130 (from Table 3)	Number of films released [5]	Use of intellectual potential in cinematography, UIPS (movies), films per million people	Relative percentage, %
1	Iceland	99,99	0,4	0,009	7	770,45	100,0
2	Luxembourg	100,00	0,7	0,016	11	690,74	89,7
3	Malta	99,19	0,5	0,010	1	100,06	13,0
4	Montenegro	98,65	0,6	0,011	1	91,03	11,8

**§14. Use of intellectual potential in book publishing in 2022-2024: top 68 countries by books placed in depositories and top 35 countries by number of published book titles**

WIPO provides data on book publishing in the world in two ways: by the number of books placed in depositories and by the number of books published, therefore, tables 36 and 37 show the results for two options for calculating the use of intellectual potential in book publishing.

Table 36. Top-68 countries by the use of intellectual potential in book publishing, option No.1 (by the number of books placed in depositories) in 2022-2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of books placed in depositories [13, p. 17-18]	Use of intellectual potential in book publishing, UIPS (books, option No.1), books per million people	Relative percentage , %
1	Denmark	97,94	6,0	0,0977	90080	921890	100,0
2	Iceland	99,99	0,4	0,0091	4718	519281	56,3
3	Albania	97,19	2,8	0,0402	15080	375075	40,7
4	Germany	99,64	83,9	1,8026	401197	222567	24,1
5	Finland	100,30	5,6	0,1336	29650	221982	24,1
6	Estonia	99,39	1,3	0,0268	5715	212972	23,1
7	Lithuania	98,67	2,8	0,0514	9443	183599	19,9
8	Luxembourg	100,00	0,7	0,0159	2607	163704	17,8
9	Norway	98,52	5,6	0,1004	14735	146808	15,9
10	Slovenia	101,96	2,1	0,0647	8713	134761	14,6
11	Montenegro	98,65	0,6	0,0110	1448	131812	14,3
12	Hungary	99,46	9,6	0,2004	25030	124900	13,5
13	Austria	99,65	9,1	0,1958	22929	117089	12,7
14	Latvia	98,84	1,8	0,0340	3777	111109	12,1
15	United Kingdom	99,68	69,6	1,5049	167000	110969	12,0
16	Costa Rica	94,15	5,2	0,0438	4713	107589	11,7
17	Sweden	98,49	10,7	0,1908	18594	97435	10,6
18	Croatia	99,17	3,8	0,0757	7354	97135	10,5
19	Mauritius	96,89	1,3	0,0177	1712	96511	10,5
20	Romania	96,31	18,9	0,2335	19933	85384	9,3
21	Greece	100,07	9,9	0,2277	18765	82400	8,9
22	Czech Republic	99,73	10,6	0,2310	18750	81157	8,8
23	Uruguay	95,01	3,4	0,0334	2593	77562	8,4
24	Singapore	105,14	5,9	0,2875	21345	74248	8,1
25	Moldova	97,32	3,0	0,0440	3044	69128	7,5
26	Portugal	99,34	10,4	0,2130	14637	68732	7,5
27	Serbia	100,86	6,7	0,1744	11850	67952	7,4
28	Belgium	100,11	11,8	0,2732	17422	63780	6,9
29	Spain	102,30	47,9	1,5518	98289	63337	6,9
30	Israel	99,07	9,5	0,1862	11190	60085	6,5
31	Netherlands	99,72	18,4	0,4004	23400	58442	6,3
32	Slovakia	99,76	5,4	0,1183	6272	53036	5,8
33	Turkey	99,07	87,7	1,7193	91145	53014	5,8
34	Poland	99,35	38,0	0,7794	40598	52091	5,7
35	North Macedonia	97,59	1,8	0,0276	1359	49152	5,3
36	Georgia	100,59	3,8	0,0948	4660	49133	5,3
37	Malta	99,19	0,5	0,0100	471	47129	5,1
38	Chile	95,38	19,9	0,2089	9189	43979	4,8

39	France	101,42	66,7	1,8922	81909	43288	4,7
40	Panama	90,49	4,6	0,0194	804	41424	4,5
41	Jordan	96,71	11,5	0,1522	5924	38931	4,2
42	New Zealand	102,08	5,3	0,1661	6400	38520	4,2
43	Paraguay	90,76	7,0	0,0311	1109	35615	3,9
44	USA	99,74	347,7	7,5904	264722	34876	3,8
45	Armenia	102,58	2,9	0,0979	3280	33488	3,6
46	South Korea	106,43	51,6	2,9955	89110	29748	3,2
47	Azerbaijan	98,71	10,4	0,1923	5433	28254	3,1
48	Malaysia	100,48	36,1	0,8857	22856	25806	2,8
49	Ireland	98,32	5,3	0,0919	1864	20279	2,2
50	Japan	106,40	122,9	7,1062	113296	15943	1,7
51	Canada	101,65	40,2	1,1810	17539	14851	1,6
52	Brazil	92,92	213,0	1,4309	21067	14723	1,6
53	Peru	99,37	34,6	0,7119	9645	13548	1,5
54	Argentina	94,39	45,9	0,4038	5297	13117	1,4
55	Vietnam	100,12	101,7	2,3580	29969	12710	1,4
56	Ghana	90,25	35,2	0,1417	1389	9805	1,1
57	Ecuador	95,00	18,3	0,1796	1707	9503	1,0
58	Thailand	101,52	71,6	2,0624	19351	9383	1,0
59	Algeria	97,01	47,6	0,6629	5375	8108	0,9
60	Uganda	89,89	51,7	0,1938	1523	7860	0,9
61	Kenya	91,22	57,8	0,2812	2188	7782	0,8
62	Mexico	95,51	132,2	1,4202	6692	4712	0,5
63	Sri Lanka	102,02	23,3	0,7239	3082	4258	0,5
64	Myanmar	97,37	54,9	0,8127	2461	3028	0,3
65	Uzbekistan	96,79	37,2	0,4990	1387	2779	0,3
66	Cyprus	98,51	1,4	0,0251	35	1397	0,2
67	Pakistan	93,25	256,1	1,8293	1911	1045	0,1
68	Philippines	96,66	117,0	1,5349	1352	881	0,1

Table 37. Top-35 countries by the use of intellectual potential in book publishing, option No.2 (by the number of book titles published) in 2022-2024

No.	Country	Average IQ of the country's inhabitants [3]	Population of the country, million people [4]	Intellectual potential of the country IPS , million people with IQ over 130 (from Table 3)	Number of published book titles, [13, p.10]	Use of intellectual potential in book publishing, UIPS (books, option No.2), books per million people	Relative percentage, %
1	Norway	98,52	5,6	0,1004	66212	659684	100,0
2	Estonia	99,39	1,3	0,0268	5543	206563	31,3
3	Denmark	97,94	6,0	0,0977	11859	121366	18,4
4	Turkey	99,07	87,7	1,7193	206674	120211	18,2
5	Iceland	99,99	0,4	0,0091	1046	115127	17,5

6	Brazil	92,92	213,0	1,4309	146575	102433	15,5
7	United Kingdom	99,68	69,6	1,5049	153000	101666	15,4
8	Finland	100,3	5,6	0,1336	12390	92761	14,1
9	Hungary	99,46	9,6	0,2004	16045	80064	12,1
10	Italy	100,84	59,0	1,5309	121127	79121	12,0
11	Austria	99,65	9,1	0,1958	12157	62081	9,4
12	France	101,42	66,7	1,8922	111503	58929	8,9
13	Czech Republic	99,73	10,6	0,2310	13413	58057	8,8
14	Greece	100,07	9,9	0,2277	13218	58042	8,8
15	Malta	99,19	0,5	0,0100	571	57135	8,7
16	Spain	102,3	47,9	1,5518	83091	53543	8,1
17	Colombia	93,17	53,6	0,3772	15411	40854	6,2
18	Ukraine	95,38	39,3	0,4126	16786	40680	6,2
19	Germany	99,64	83,9	1,8026	71524	39678	6,0
20	Sweden	98,49	10,7	0,1908	7475	39170	5,9
21	Belgium	100,11	11,8	0,2732	10559	38655	5,9
22	Ecuador	95	18,3	0,1796	6600	36744	5,6
23	Belarus	101,47	9,0	0,2573	8586	33374	5,1
24	Ireland	98,32	5,3	0,0919	2162	23521	3,6
25	South Korea	106,43	51,6	2,9955	64657	21585	3,3
26	Lebanon	99,39	5,9	0,1218	2500	20528	3,1
27	Russia	103,16	143,8	5,2890	81615	15431	2,3
28	New Zealand	102,08	5,3	0,1661	2475	14896	2,3
29	Kyrgyzstan	94,85	7,3	0,0698	1003	14378	2,2
30	Mexico	95,51	132,2	1,4202	18589	13089	2,0
31	Cuba	96,02	10,9	0,1280	1554	12138	1,8
32	Portugal	99,34	10,4	0,2130	2115	9932	1,5
33	Japan	106,4	122,9	7,1062	68429	9630	1,5
34	Thailand	101,52	71,6	2,0624	16031	7773	1,2
35	Philippines	96,66	117,0	1,5349	5792	3773	0,6

**§15. Use of the intellectual potential of humanity in technology from 2015 to 2024**

For all of humanity, the percentage of people who have an IQ greater than 130 is 2.275%.

Table 38. Humanity's use of its intellectual potential in the field of technical creativity from 2015 to 2024

No.	Year	Humanity population [11]	Number of patents in force this year, thousands [14]	The use of humanity's intellectual potential in technology, UIPH (patents), patents per million people
1	2015	7470,5	11400,9	1526,1
2	2016	7558,6	12180,3	1611,4
3	2017	7645,6	13077,3	1710,4
4	2018	7729,9	13945,0	1804,0
5	2019	7811,3	14941,4	1912,8
6	2020	7887,0	15851,6	2009,8
7	2021	7954,4	16541,8	2079,6

8	2022	8021,4	17255,0	2151,1
9	2023	8091,7	18607,1	2299,5
10	2024	8162,0	19727,8	2417,0

***§16. Use of the intellectual potential of humanity in cinematography from 2000 to 2023***

For all of humanity, the percentage of people who have an IQ greater than 130 is 2.275%.

Table 39. Humanity's use of its intellectual potential in cinematography

No.	Year	Humanity population [11]	Number of feature films released this year, units [9]	The use of humanity's intellectual potential in cinematography, UIPH (movies),	
				films per million people	films per thousand people
1	2000	6171,7	3803	0,6162	616,2
2	2001	6254,9	3801	0,6077	607,7
3	2002	6337,7	4012	0,6330	633,0
4	2003	6420,4	3896	0,6068	606,8
5	2004	6503,4	4228	0,6501	650,1
6	2005	6587,0	4848	0,7360	736,0
7	2006	6671,5	5279	0,7913	791,3
8	2007	6757,3	5484	0,8116	811,6
9	2008	6844,5	5559	0,8122	812,2
10	2009	6932,8	5755	0,8301	830,1
11	2010	7021,7	5831	0,8304	830,4
12	2011	7110,9	6128	0,8618	861,8
13	2012	7201,2	6785	0,9422	942,2
14	2013	7291,8	6872	0,9424	942,4
15	2014	7381,6	7393	1,0015	1001,5
16	2015	7470,5	7620	1,0200	1020,0
17	2016	7558,6	7902	1,0454	1045,4
18	2017	7645,6	8127	1,0630	1063,0
19	2018	7729,9	8516	1,1017	1101,7
20	2019	7811,3	9328	1,1942	1194,2
21	2020	7887,0	5656	0,7171	717,1
22	2021	7954,4	7827	0,9840	984,0
23	2022	8021,4	8833	1,1012	1101,2
24	2023	8091,7	9511	1,1754	1175,4

**Conclusions:**

1. The concept of intellectual potential is introduced as the number of people with an IQ above 130 in the study group of people.
2. The intellectual potential of humanity has been calculated at some points in time during the last 130 thousand years.

3. Over the past 130 thousand years, the intellectual potential of humanity has grown by about 25,000-70000 times, and over the past 12,000 years, the intellectual potential of humanity has grown by 2,100 times.

3. One year of modern scientific, technological and cultural development of humanity corresponds to 2000 years of development of people who lived 12,000 years ago, and one year of modern scientific, technological and cultural development of humanity corresponds to 30 years of human development 1000 years ago.

5. The higher the number of humanity, the higher the size of our intellectual potential, and therefore the higher the opportunities in the field of science, technology and art.

6. The top 126 countries of the world in terms of the percentage of people with an IQ over 130 and the top 126 countries of the world in terms of intellectual potential for 2024 are calculated.

7. The concept of using intellectual potential in various fields of activity is introduced.

8. The top 120 countries for the use of intellectual potential in science in 2024 have been calculated.

9. The top 98 countries for the use of intellectual potential in technology in 2024 have been calculated.

10. The top 111 countries for the use of intellectual potential in music in 2024 have been calculated.

11. The top 102 countries for the use of intellectual potential in cinematography in 2024 have been calculated.

12. The use of intellectual potential in book publishing in 2022-2024 is considered: the top 68 countries in terms of books deposited in depositories and the top 35 countries in terms of the number of published book titles are calculated.

13. The use of humanity's intellectual potential in technology from 2015 to 2024 is calculated.

14. The use of the intellectual potential of humanity in cinematography from 2000 to 2023 is calculated.

## **References:**

1. Ponting C. World history. A new look. [lane from English]. Moscow: AST; Astrel, 2010 (on Russian).

2. 2025 Research Leaders: Leading countries/territories. The 2025 Research Leaders are based on Nature Index data from 1 January 2024 to 31 December 2024 // Nature Index. Springer Nature. URL: <https://www.nature.com/nature-index/country-outputs/generate/all/global> , column «Share 2024» (date accessed: October 06, 2025).

3. Average IQ by Country (2025 update) // The Wayback Machine - Official International IQ test website (active since 2018). URL: [https://web.archive.org/web/20250927161425/https://international-iq-test.com/en/test/IQ\\_by\\_country](https://web.archive.org/web/20250927161425/https://international-iq-test.com/en/test/IQ_by_country) (date accessed: September 28, 2025).

4. Countries in the world by population (2025) // Source: Worldometer ([www.Worldometers.info](http://www.Worldometers.info)) Elaboration of data by United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2024 Revision <https://population.un.org/wpp/> (Medium-fertility variant). URL: <https://www.worldometers.info/world-population/population-by-country/> , column «Population 2025» (date accessed: September 28, 2025).

5. Country Breakdown for 2024 // The Numbers. Nash Information Services, LLC. URL: <https://www.the-numbers.com/movies/country-breakdown/2024> (date accessed: 11.11.2025).
6. DeSilva J, Fannin L, Cheney I, Claxton A, Ilieş I, Kittelberger J, Stibel J and Traniello J (2023) Human brains *have* shrunk: the questions are *when* and *why*. *Front. Ecol. Evol.* 11:1191274. doi: 10.3389/fevo.2023.1191274
7. Music from the year 2024 // Discogs. URL: <https://www.discogs.com/ru/search?q=&type=all&page=1&year=2024> (date accessed: November 10, 2025).
8. Per Sjödin, Agnes E Sjöstrand, Mattias Jakobsson, and Michael G B Blum. Resequencing Data Provide No Evidence for a Human Bottleneck in Africa during the Penultimate Glacial Period // *Molecular Biology and Evolution* · February 2012. P.13. DOI: 10.1093/molbev/mss061
9. Hancock D. (Omdia), Rousseau C., Slee J. and Wunsch-Vincent S. (WIPO). Global Film Production Hits Historic High, Surpassing Pre-Pandemic Levels. April 30, 2025 // WIPO. URL: <https://www.wipo.int/en/web/global-innovation-index/w/blogs/2025/global-film-production> (date accessed: December 02, 2025).
10. World Population Today. Wednesday, November 12, 2025 // Nations GEO, Education, Server 3. URL: <https://nationsgeo.com/population/> (date accessed: November 12, 2025).
11. World Population by Year // Worldometer. Elaboration of data by United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2024 Revision. (Medium-fertility variant). URL: <https://www.worldometers.info/world-population/world-population-by-year/> (date accessed: November 12, 2025).
12. World Intellectual Property Organization (WIPO) (2024). *World Intellectual Property Indicators 2024*. Geneva: WIPO. DOI: 10.34667/tind.50133 . Table A60. Patent applications by office and origin, 2023, column «Resident». P. 56-59 (date accessed: November 07, 2025).
13. World Intellectual Property Organization (2023). *The Global Publishing Industry in 2022*. Geneva: WIPO. DOI: 10.34667/tind.48714 (date accessed: October 28, 2025).
14. World Intellectual Property Organization // WIPO IP Statistics Data Center. Indicator: IP rights in force. Patent. URL: <https://www3.wipo.int/ipstats/key-search/search-result?type=KEY&key=205> (date accessed: November 01, 2025).