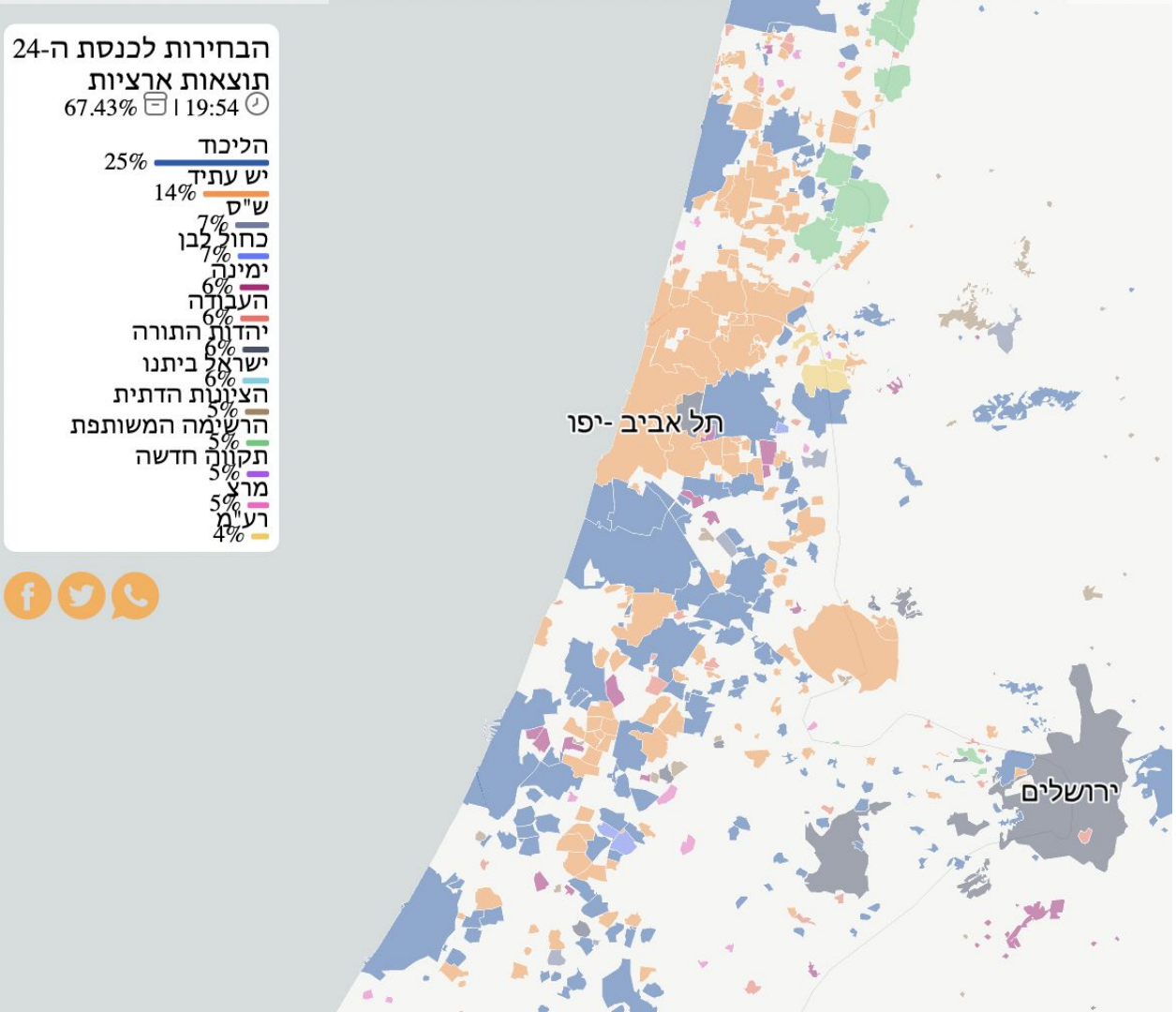
What Would you like to know?

Are there any silly questions?

What about difficult questions?


Is my name frequent?
SARAH
SHIRLEY
ABIGAIL
CAMDEN
MADISON
HANNAH
TONY
CHET
CARSON
SHANNON
JUSTIN
CHRISTINA
CAMERON
ASHLEY
COURTNEY
NOEL
KIANI
JENNY
JENNI
CAROLINE
BURT
JOY
ETHAN
JOSEPH
DAN
CATLIN
HALLE
EAST
AINSLEY



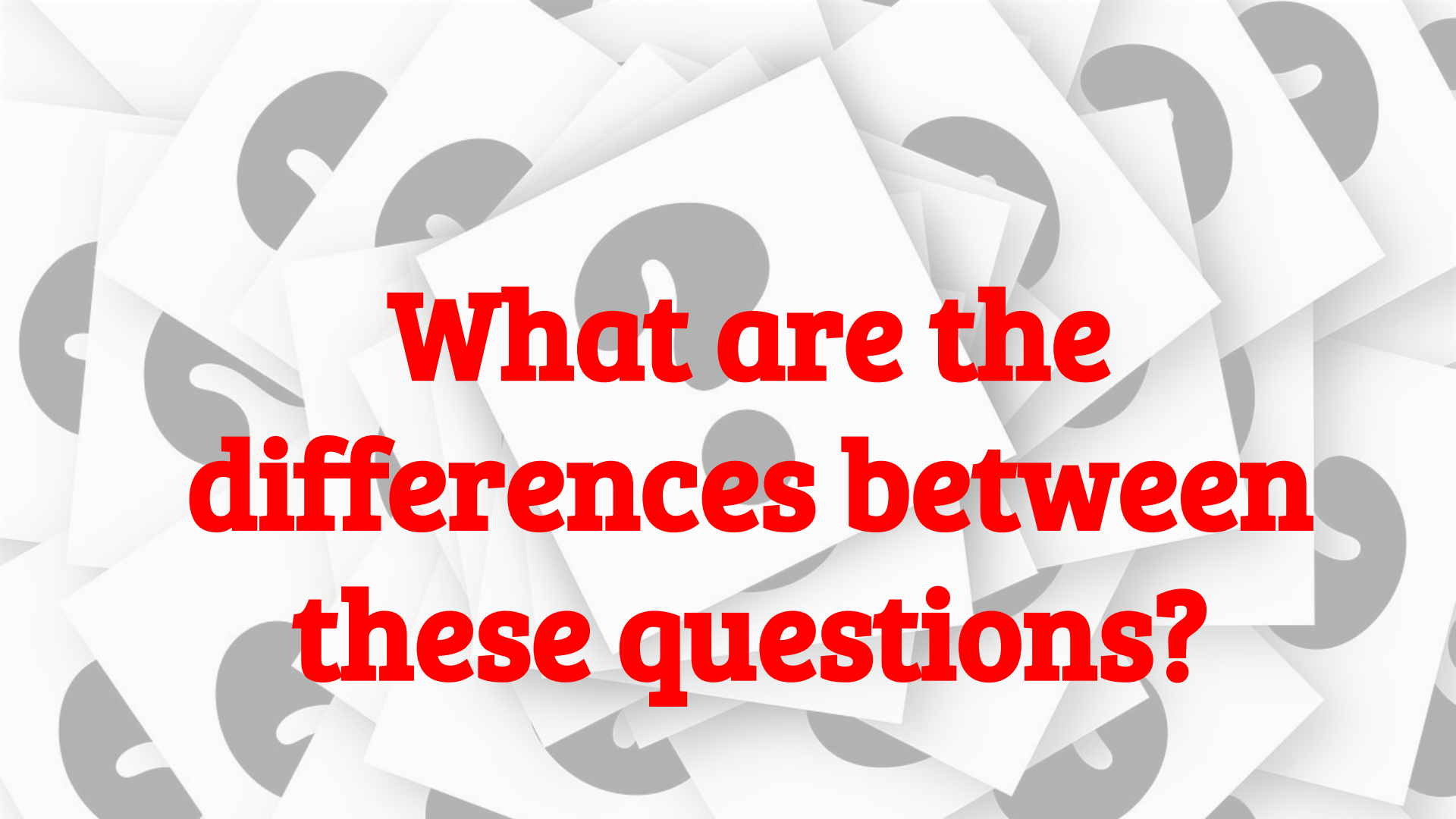
What parties won the most votes in your town?

Is the world's population increasing?

s the
arth
und?

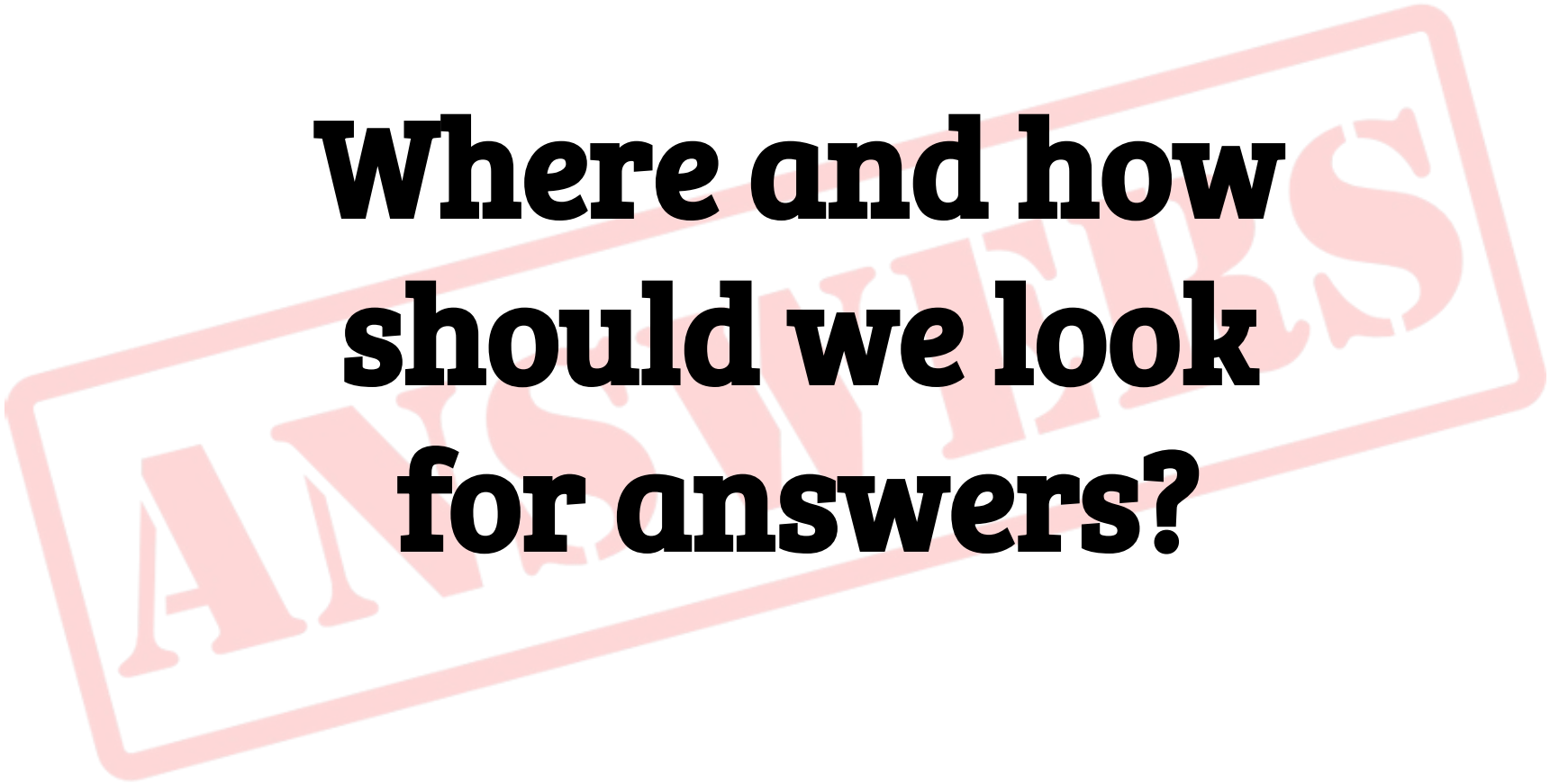
Vaccines: Are they safe?


Global warming - Is it man made or natural?


What are the differences between these questions?


SHIRLEY
MADISON
CARSON
JARED
MEGAN
GRACE
JUSTIN
SHERICE
STACY
JOEL
THADDEUS
CAMERON
ASHL
COURTNEY
NOEL
KIANI
JENNY
JENNI
CAROLINE
BURT
JOY
ETHA
DAN
CATLIN
HALLE
EAST
AINSLEY

Where and how should we look for answers?




Is my name frequent?
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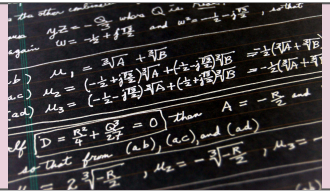
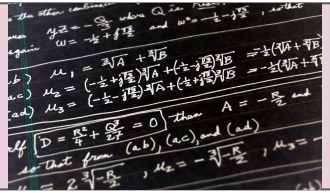


Formulating a well defined question

What is required for addressing the question?

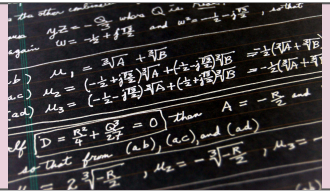
Collecting and analysing the relevant data

Formulating the answer and the underlying assumptions



Formulating a well defined question

Is my name frequent?



Formulating a well defined question

Is my name frequent?

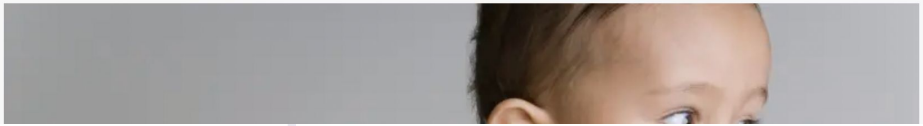
What does frequent mean?

What is required for addressing the question?

Most popular baby names of 2020: Mohammed, David, Tamar and Maryam

David and Tamar were the most popular for Jewish baby boys and girls; Mohammed and Maryam for Arab ones.

By JERUSALEM POST STAFF **Published:** DECEMBER 21, 2021 14:34
Updated: DECEMBER 21, 2021 16:42

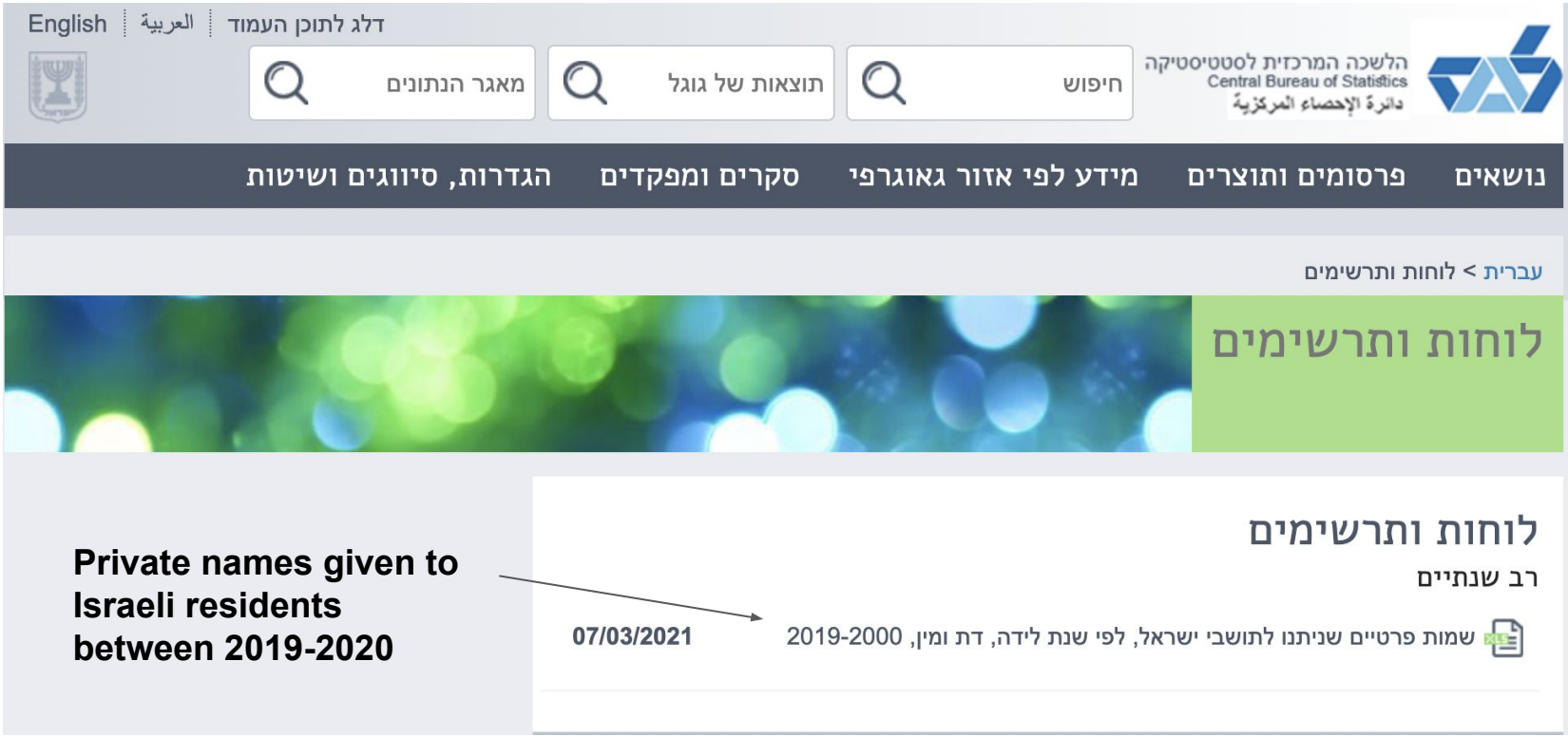


Most Popular First Names In Israel

Forebears knows about 119,229 unique forenames in Israel and there name.

Rank	Gender	Forename	Incidence	Frequency
1	99%	Yosef	101,456	1:83
2	98%	David	91,735	1:92
3	100%	Moshe	84,738	1:99

Collecting and analysing the relevant data



Private names given to Israeli residents between 2019-2020

Collecting and analysing the relevant data

- What is your name?
- When were you born?
- What is your gender?

Collecting and analysing the relevant data

- What is your name? **Ori**
- When were you born? **2015**
- What is your gender? **Girl**

Collecting and analysing the relevant data

- What is your name? **Ori**
- When were you born? **2015**
- What is your gender? **Girl**
- What is the total number of Jewish Israeli girls whose private names were given between 1948 and 2019?
- How many girls have the same name as you?

Collecting and analysing the relevant data

- What is your name? **Ori**
- When were you born? **2015**
- What is your gender? **Girl**
- What is the total number of Jewish Israeli girls whose private names were given between 1948 and 2019? **2,553,426**
- How many girls have the same name as you? **5711**

Collecting and analysing the relevant data

- How likely is it that a girl in Israel is named **Ori**?

Collecting and analysing the relevant data

- How likely is it that a girl in Israel is named **Ori**? **5711/2,553,426 = 0.0022**.
- One of every **447** girls is named **Ori**.

Collecting and analysing the relevant data

- How likely is it that a girl in Israel is named **Ori**?
  5711/2,553,426 = 0.0022
- One of every **447** girls is named **Ori**.
- Is the name **Ori** frequent?

Collecting and analysing the relevant data

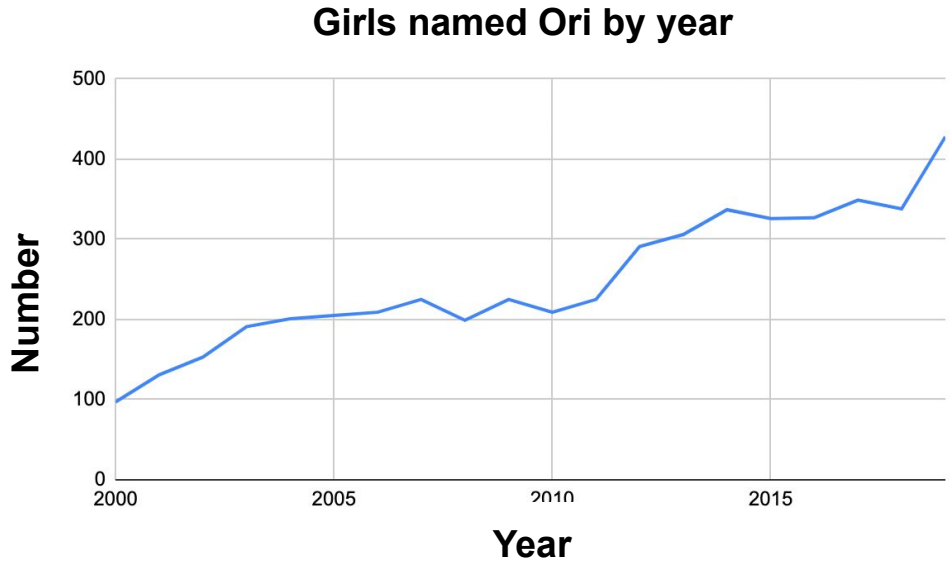
- What is the **most common** name? Noa (45,039/N)
- What is the **rarest** name? Asura (5/N)
- What is the **average** frequency? 1773/N
- What is the **median** frequency? 192/N
- N=2,553,426

Collecting and analysing the relevant data

- Is our calculation correct?

Collecting and analysing the relevant data

- Is our calculation correct?



Collecting and analysing the relevant data

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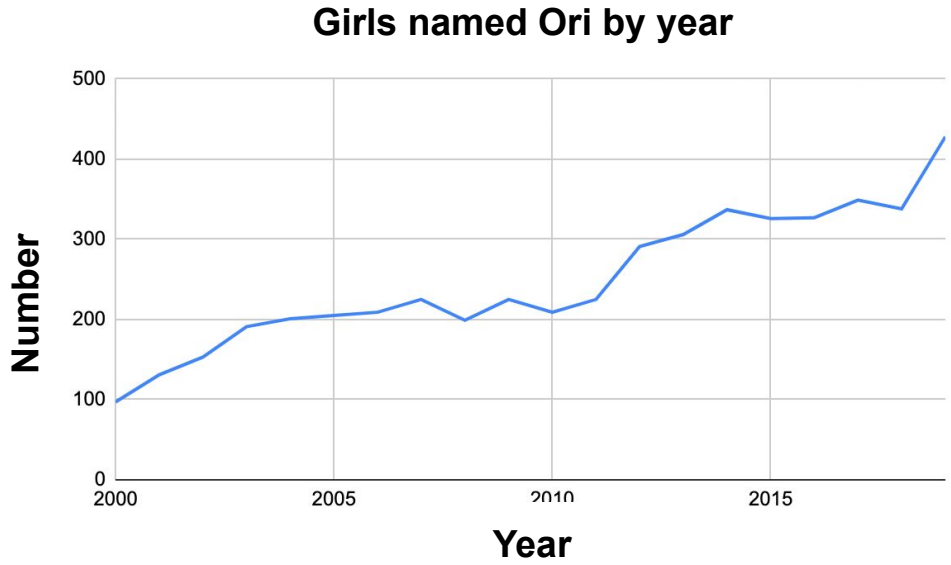


There has been an **increase** in the number of girls named **Ori**.

Is it **more frequent**?

Collecting and analysing the relevant data

- How likely is it that a girl in Israel is named **Ori**?

Years	#girls	#Ori	%	One of
1948-2019	2553426	5711	0.22	447
2004-2009				
2010-2015				

Collecting and analysing the relevant data

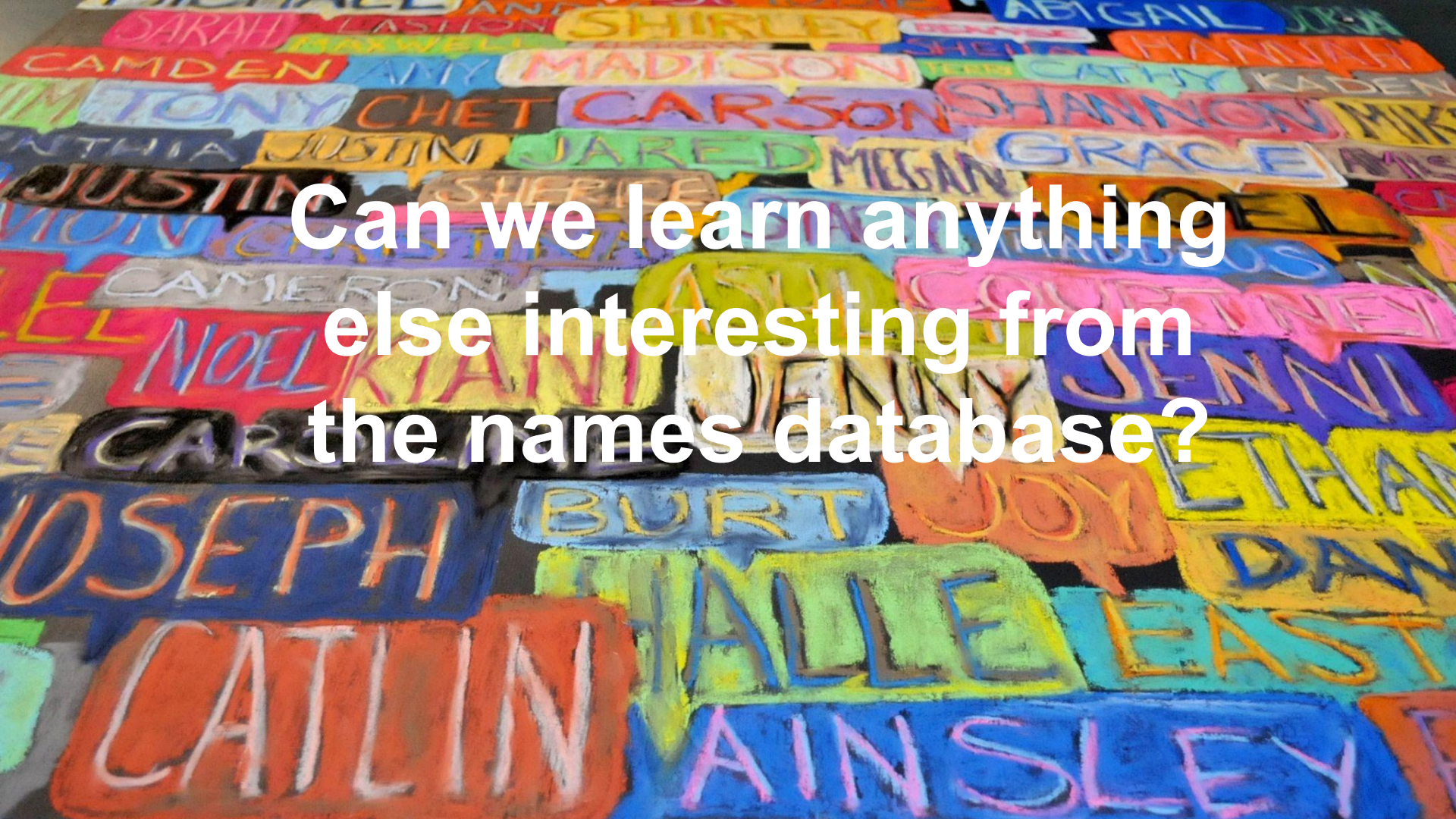
- How likely is it that a girl in Israel is named **Ori**?

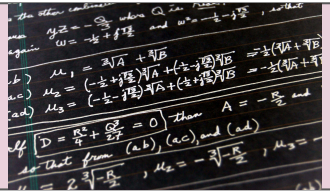
Years	#girls	#Ori	%	One of
1948-2019	2553426	5711	0.22	447
2004-2009	299744	1264	0.42	238
2010-2015	355528	1694	**0.48**	208

What are the assumptions that underlie our analysis?

Formulating the answer and the underlying assumptions

- Our assumption:
  - The name Ori is given uniformly across Israel's cities
  - This database is unbiased and covers the whole population.
- Ori **is not a common** name. Only one out of every 447 women has the name Ori.
- Over time, this name becomes **more frequent**.


Can we learn anything
else interesting from
the names database?



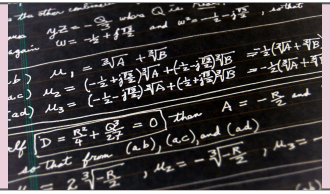
Formulating a well defined question

What is required for addressing the question?

Collecting and analysing the relevant data

Formulating the answer and the underlying assumptions

Is the world's population increasing?



Formulating a well defined question

In the last five years, has the world population increased?

Is it likely to continue increasing?

What is the rate of increase?

What is required for addressing the question?

world population

All Images Videos News Maps Settings

Israel (en) Safe search: moderate Any time

World Population Clock: 7.9 Billion People (2021 ...

https://www.worldometers.info/world-population/

The current **world population** is 7.9 billion as of September 2021 [1] according to the most recent United Nations estimates elaborated by Worldometer. The term "**World Population**" refers to the human **population** (the total number of humans currently living) of the **world**. 7 Billion (2011)

Population Clock: World - Census.gov

https://www.census.gov/popclock/world

Populations shown for the Most Populous Countries and on the **world** map are projected to July 1, 2021. To learn more about **world population** projections, go to Notes on the **World Population** Clock. To learn more about international trade data, go to Guide to Foreign Trade Statistics. All trade figures are in U.S. dollars on a nominal basis.

World population - Wikipedia

https://en.wikipedia.org/wiki/World_population

High, medium and low projections of the future human **world population** In demographics,

What is required for addressing the question?

Current World Population

7,892,173,911

view all people on 1 page >

TODAY	THIS YEAR
Births today **262,403**	Births this year **96,963,366**
Deaths today **110,163**	Deaths this year **40,707,544**
Population Growth today **152,240**	Population Growth this year **56,255,822**

World Population (2020 and historical)

View the complete population historical table

Year (July 1)	Population	Yearly % Change	Yearly Change	Median Age	Fertility Rate	Density (P/Km²)	Urban Pop %	Urban Population
2020	**7,794,798,739**	1.05 %	81,330,639	30.9	2.47	52	56.2 %	4,378,993,944
2019	**7,713,468,100**	1.08 %	82,377,060	29.8	2.51	52	55.7 %	4,299,438,618
2018	**7,631,091,040**	1.10 %	83,232,115	29.8	2.51	51	55.3 %	4,219,817,318
2017	**7,547,858,925**	1.12 %	83,836,876	29.8	2.51	51	54.9 %	4,140,188,594
2016	**7,464,022,049**	1.14 %	84,224,910	29.8	2.51	50	54.4 %	4,060,652,683
2015	**7,379,797,139**	1.19 %	84,594,707	30	2.52	50	54.0 %	3,981,497,663
2010	**6,956,823,603**	1.24 %	82,983,315	28	2.58	47	51.7 %	3,594,868,146
2005	**6,541,907,027**	1.26 %	79,682,641	27	2.65	44	49.2 %	3,215,905,863
2000	**6,143,493,823**	1.35 %	79,856,169	26	2.78	41	46.7 %	2,868,307,513
1995	**5,744,212,979**	1.52 %	83,396,384	25	3.01	39	44.8 %	2,575,505,235
1990	**5,327,231,061**	1.81 %	91,261,864	24	3.44	36	43.0 %	2,290,228,096
1985	**4,870,921,740**	1.79 %	82,583,645	23	3.59	33	41.2 %	2,007,939,063

What is required for addressing the question?

Is it a reliable source?

What is required for addressing the question?

Is it a reliable source?

worldometer

about | faq | languages | contact

What is required for addressing the question?

Is it a reliable source?

worldometer

about | faq | languages | contact

Trusted Authority

Worldometer was voted as one of the best free reference websites by the **American Library Association** (ALA), the oldest and largest library association in the world.

Worldometer is a provider of global COVID-19 statistics for many caring people around the world. Our data is also trusted and used by the **UK Government**, **Johns Hopkins CSSE**, the **Government of Thailand**, the **Government of Pakistan**, the **Government of Sri Lanka**, **Government of Vietnam**, **Financial Times**, **The New York Times**, **Business Insider**, **BBC**, and many others.

Over the past 15 years, our statistics have been requested by, and provided to: **Oxford University Press**, **Wiley**, **Pearson**, **CERN**, **World Wide Web Consortium (W3C)**, **The Atlantic**, **BBC**, Milton J. Rubenstein Museum of Science & Technology, Science Museum of Virginia, **Morgan Stanley**, **IBM**, **Hewlett Packard**, **Dell**, **Kaspersky**, **PricewaterhouseCoopers**, **Amazon Alexa**, **Google Translate**, the **United Nations Conference on Sustainable Development (Rio+20)**, the **U2** concert, and many others.

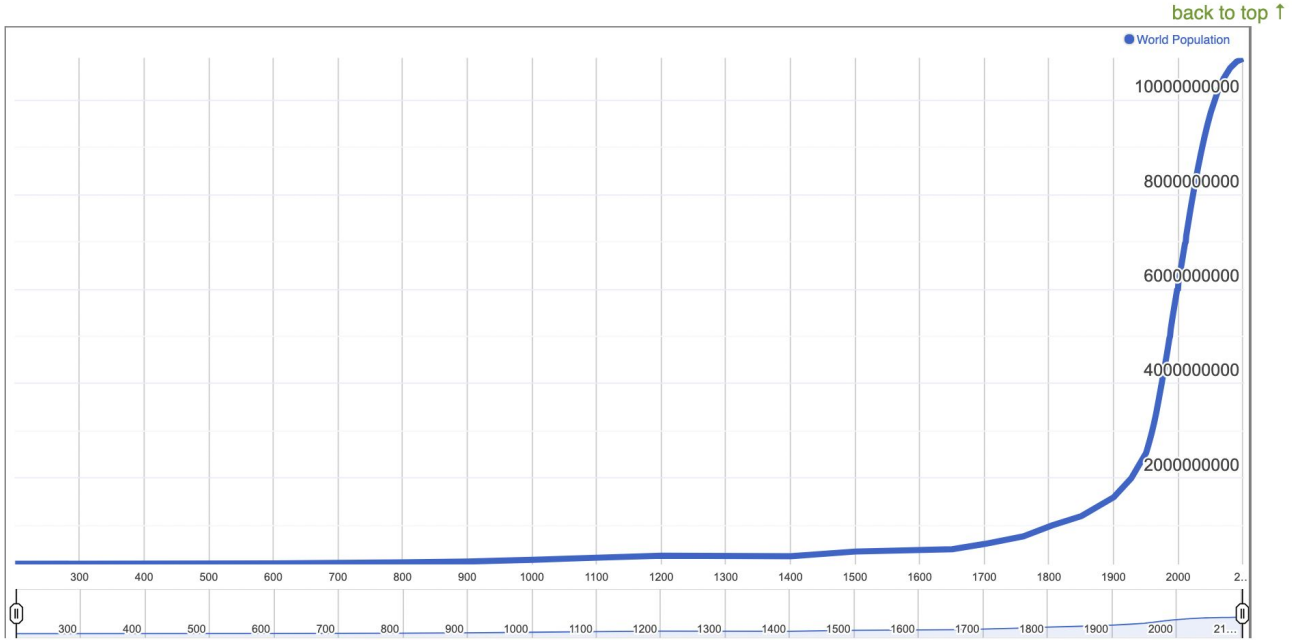
Worldometer is cited as a source in over 10,000 published books and in more than 6,000 professional journal articles.

Collecting and analysing the relevant data

In the last five years, has the world population increased?

World Population: Past, Present, and Future

(move and expand the bar at the bottom of the chart to navigate through time)



Collecting and analysing the relevant data

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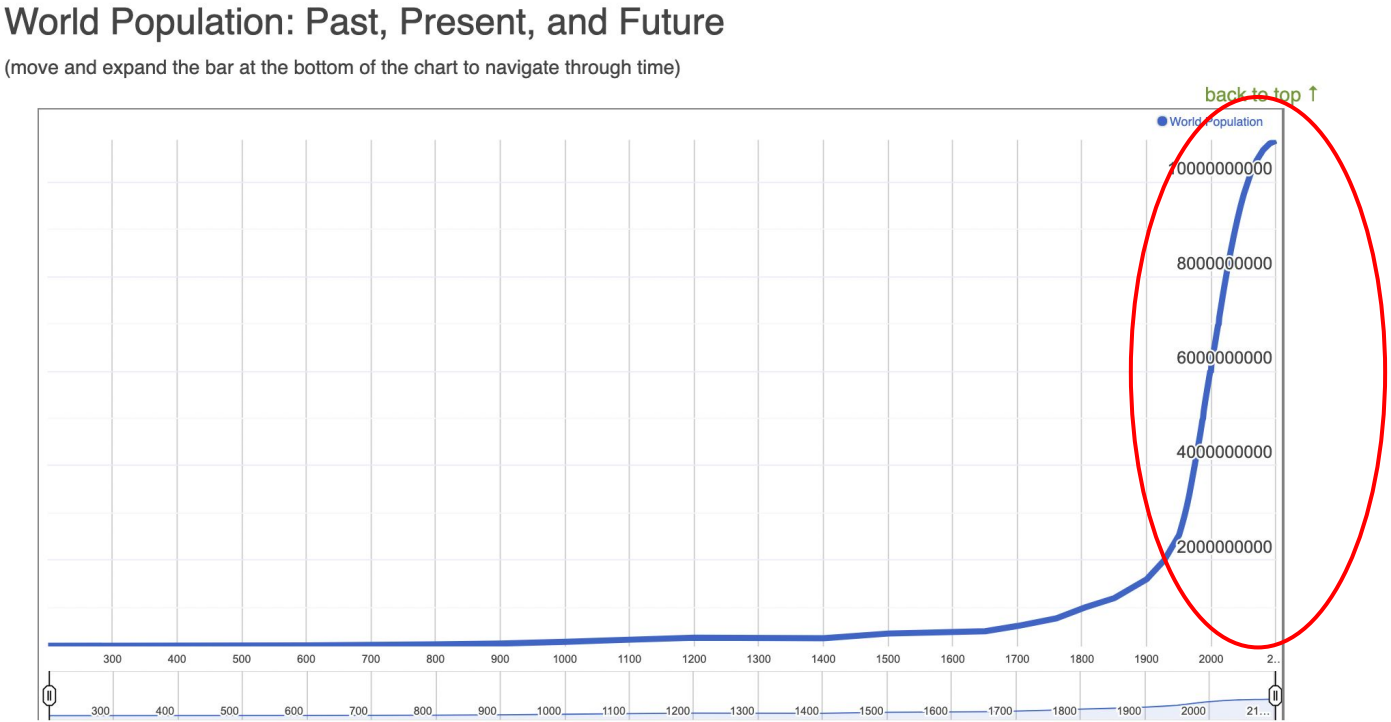

Collecting and analysing the relevant data

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2005	**6,541,907,027**	1.26 %	79,682,641	27	2.65	44	49.2 %	3,215,905,863

Collecting and analysing the relevant data

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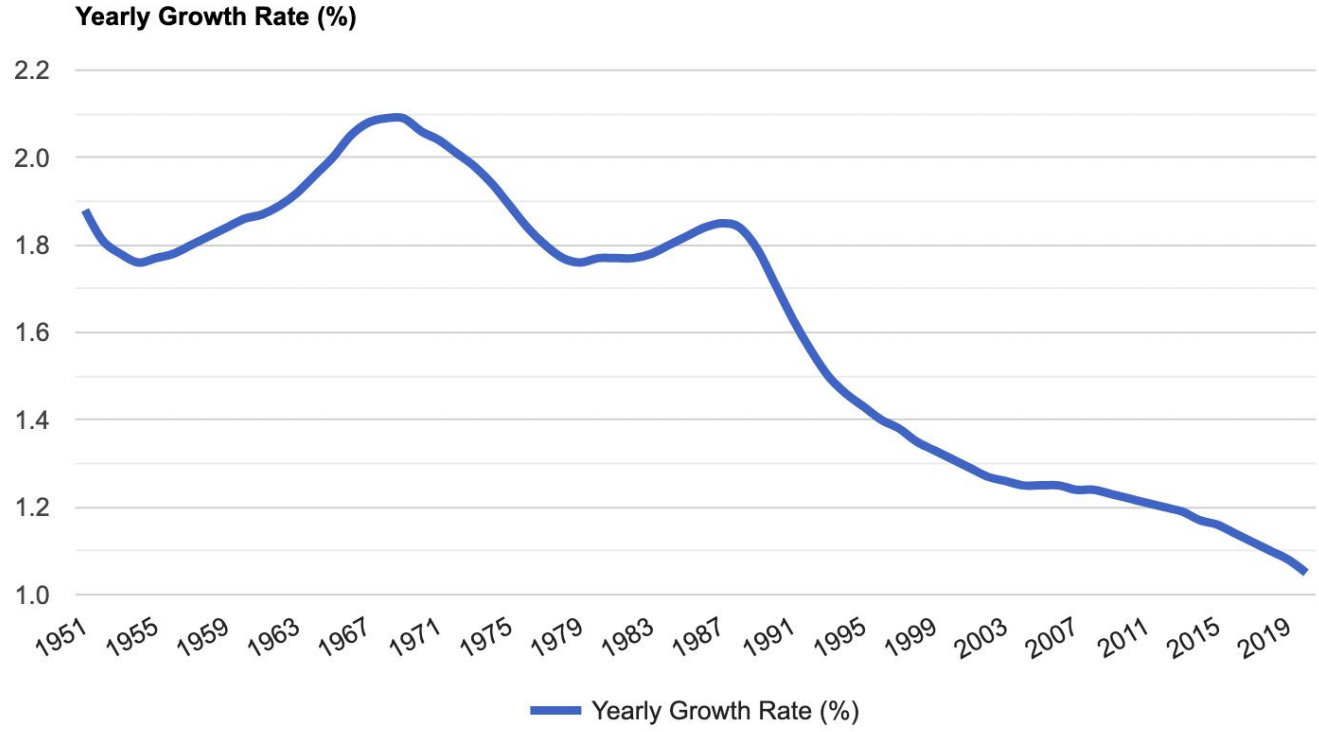
Collecting and analysing the relevant data



Collecting and analysing the relevant data

Is it likely to continue increasing?

Collecting and analysing the relevant data

World Population Forecast (2020-2050)

View population projections for all years (up to 2100)

Year (July 1)	Population	Yearly % Change	Yearly Change	Median Age	Fertility Rate	Density (P/Km²)	Urban Pop %	Urban Population
2020	**7,794,798,739**	1.10 %	83,000,320	31	2.47	52	56.2 %	4,378,993,944
2025	**8,184,437,460**	0.98 %	77,927,744	32	2.54	55	58.3 %	4,774,646,303
2030	**8,548,487,400**	0.87 %	72,809,988	33	2.62	57	60.4 %	5,167,257,546
2035	**8,887,524,213**	0.78 %	67,807,363	34	2.70	60	62.5 %	5,555,833,477
2040	**9,198,847,240**	0.69 %	62,264,605	35	2.77	62	64.6 %	5,938,249,026
2045	**9,481,803,274**	0.61 %	56,591,207	35	2.85	64	66.6 %	6,312,544,819
2050	**9,735,033,990**	0.53 %	50,646,143	36	2.95	65	68.6 %	6,679,756,162

Source: **Worldometer** (www.Worldometers.info)

Elaboration of data by United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2019 Revision. (Medium-fertility variant).

Collecting and analysing the relevant data

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Collecting and analysing the relevant data

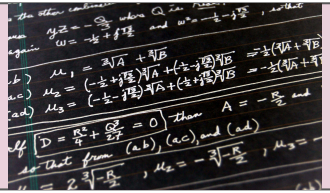
World Population Prospects 2019

Methodology of the United Nations population estimates and projections

Formulating the answer and the underlying assumptions

- Our assumption:
  - Worldometer is a reliable source.
- During the past five years, the world's population has grown by **415001600** people.
- The average annual growth rate is **1.1%**.
- The population is expected to **continue growing** in a decreasing rate.


Can we learn anything else interesting from the world’s population database?



Data - what is it?

How is data collected?

What can we learn from data?

Data - what is it?

Data - what is it?

Data - collection of values (numerical, categorical).

The world around us can be **described** by data.

We can **answer questions, make decisions, and change reality** using data.

Which data types can describe a single person?

Which data types can describe a single person?

Height

Weight

Age

What is common to all of these properties?

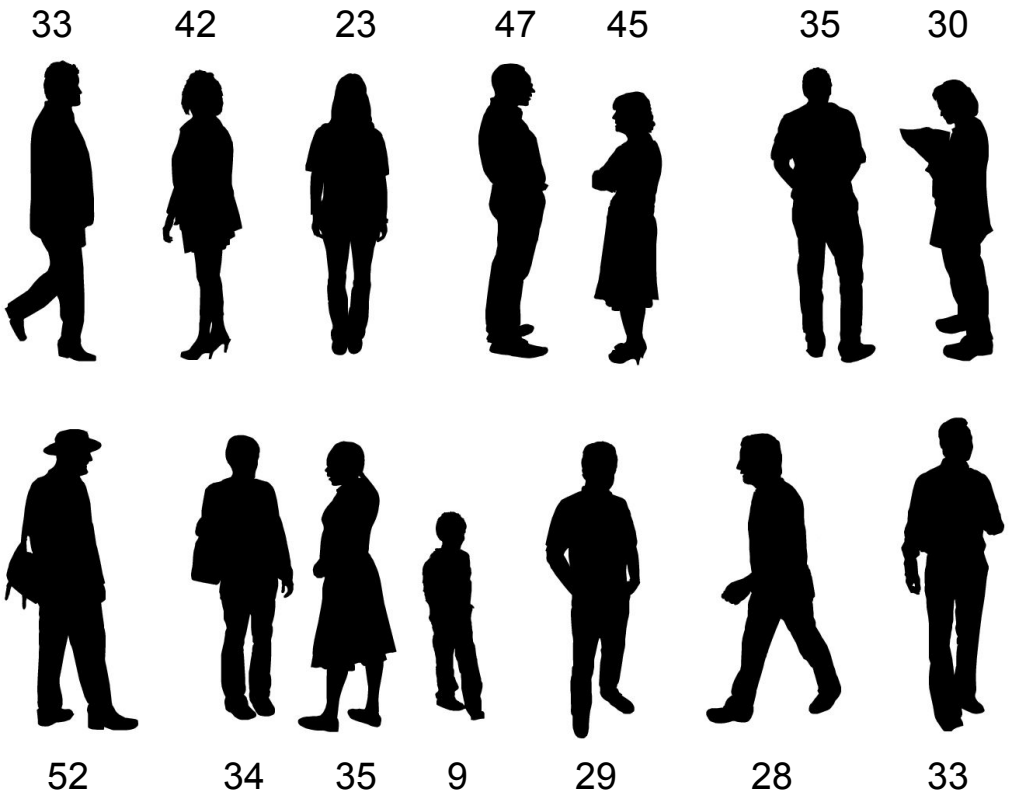
Which data types can describe a single person?

Gender

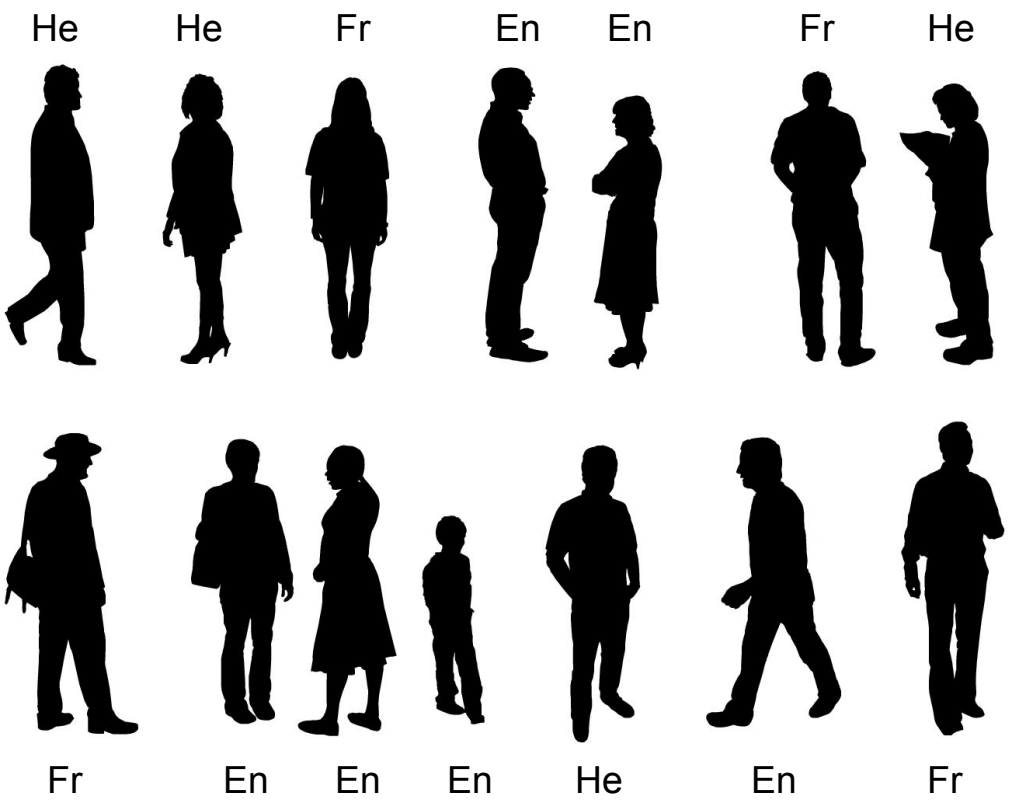
Profession

Language

What is common to all of these properties?



How can we describe a group of people?



How can we describe a group of people?

Data - what is it?

Values within a data collection must be **well defined** and **measurable**.

Well defined - each value has a clear meaning.
Measurable - measurements can be made with a small amount of error.

Data - what is it?

What kind of data did we use to answer our questions?

How is data collected?

How is data collected?

Depending on the questions we would like to answer, we need to define:

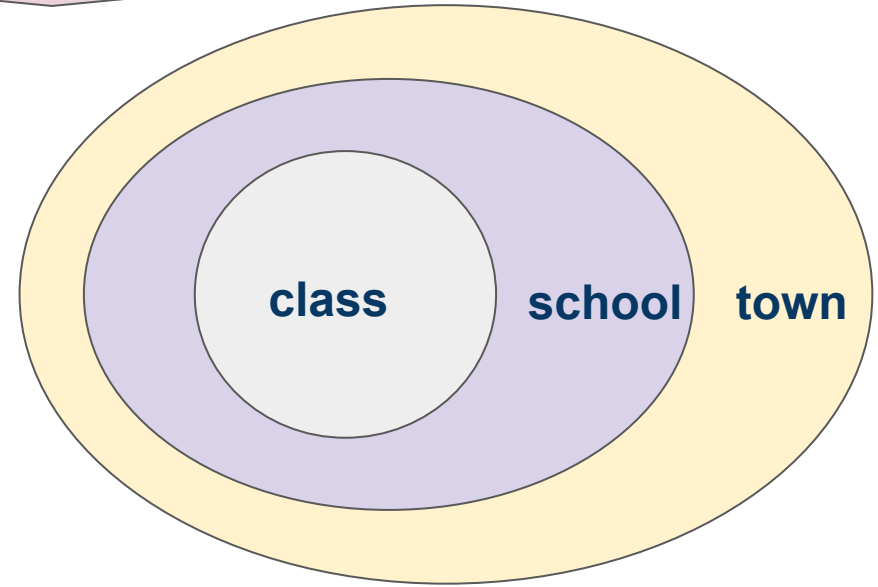
- **The sample size** - how many people do we need?
- **The sample group** - do these people belong to some group?
- **The sample method** - how do we sample?

How is data collected?

The sample size

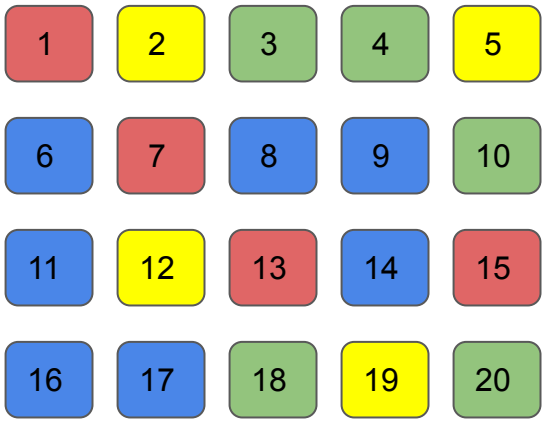
How is data collected?

The sample group



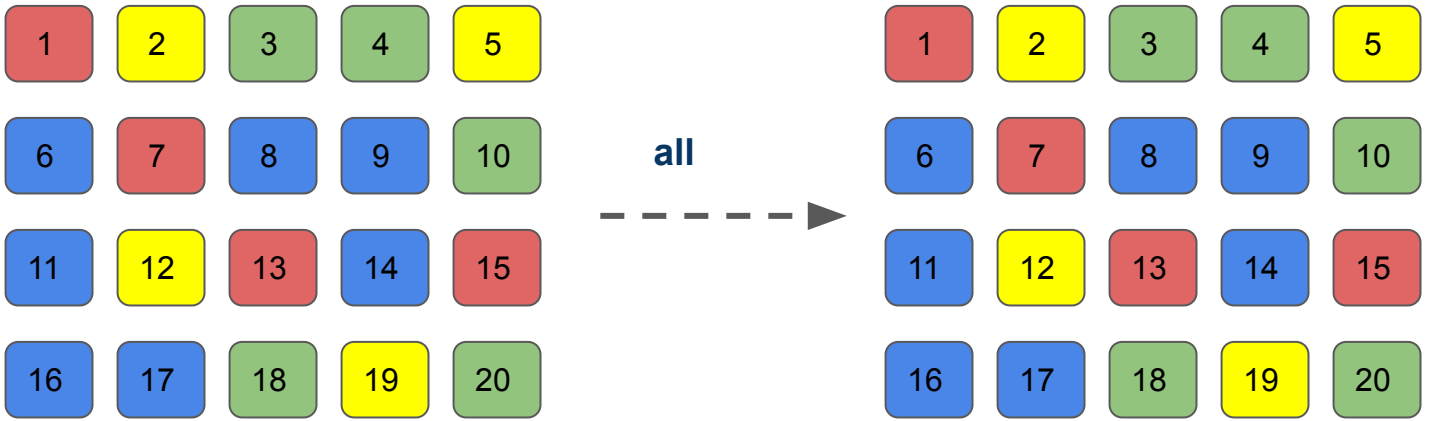
How is data collected?

The sample method



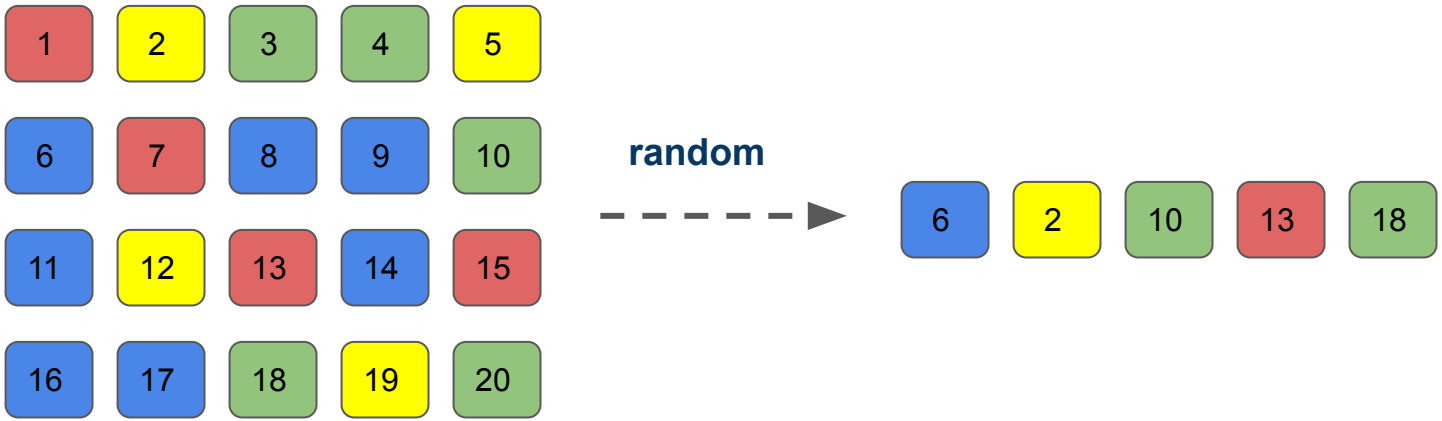
How is data collected?

The sample method



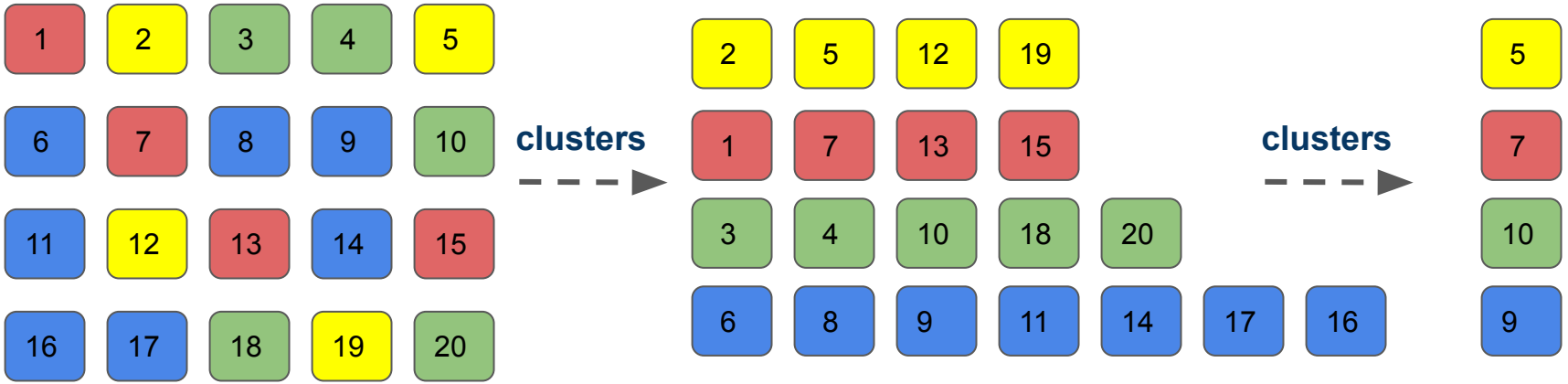
How is data collected?

The sample method



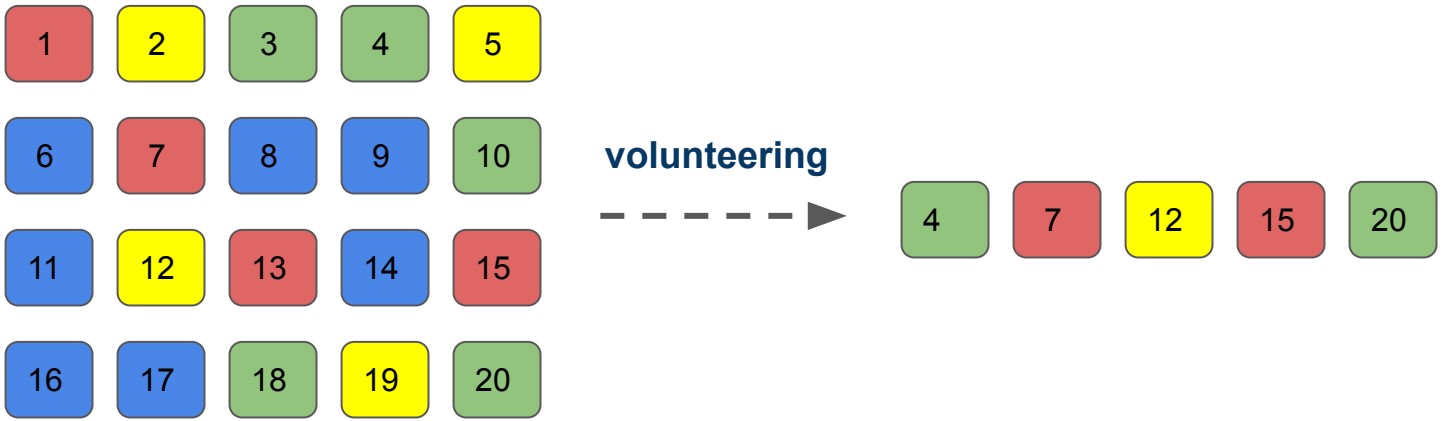
How is data collected?

The sample method



How is data collected?

The sample method



Data - what is it?

How was the data used to address our questions collected?

How many people were sampled?

What is the sampling method?