

# 21. Statistics

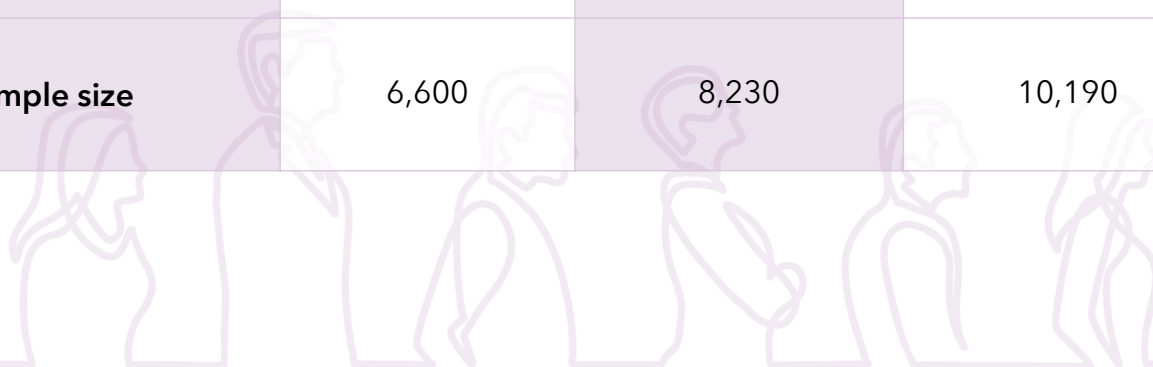
Analysing survey data relating to the impact of cost of living increases.

The Office for National Statistics (ONS) is responsible for collecting and publishing data relating to the UK's population and economy. As part of a school project on how the population is managing the period of high inflation between 2022 and 2023, you are tasked with analysing the ONS' methodology when dealing with extremely large datasets and drawing conclusions from their findings.

The tables below show the total populations and sample sizes for a range of different age groups within the general population over the age of 16.

Survey question	All persons	Aged 16 to 29 years	Aged 30 to 49 years	Aged 50 to 69 years
Population	52,140,015	9,906,720	17,299,501	16,062,196
Sample size	18,410	1,680	3,550	6,590

Survey question	Aged 70 years and over	Men	Women
Population	8,871,597	26,549,780	25,590,235
Sample size	6,600	8,230	10,190



1. The ONS has chosen to sample the population for this survey.

a. Why do you think they chose to select a sample rather than survey the whole population?

b. What are the benefits and limitations of using a sample?

2. Describe three different sampling methodologies that the ONS may have used to select this sample and explain some of the pros and cons of each approach.



3. Calculate the proportion of the population that was sampled for each group and comment on any limitations of the sample sizes used and how these may impact survey results.

Survey question	All persons	Aged 16 to 29 years	Aged 30 to 49 years	Aged 50 to 69 years	Aged 70 years and over
Population	52,140,015	9,906,720	17,299,501	16,062,196	8,871,597
Sample size	18,410	1,680	3,550	6,590	6,600
% of population sampled					



4. Compare how cost of living changes in the last month may have impacted different age groups differently. Why do you think there has been a different perceived impact on young people versus older people?

Has your cost of living changed compared to one month ago?					
Survey question and response options	All people	Aged 16 to 29 years	Aged 30 to 49 years	Aged 50 to 69 years	Aged 70 years and over
It has increased	76%	66%	78%	79%	79%
It has decreased	2%	2%	2%	2%	2%
It has stayed the same	22%	33%	21%	19%	19%



5. Looking at the below graph, draw three conclusions about how different age groups are changing their spending habits during this time. Where possible, provide a possible explanation for your conclusions.

### How people are responding to increasing cost of living

