

ADS2 Problem set: Conditional probabilities

ADS2 (based on MI Stefan)

Semester 2, 2023/24

We expect this problem set to take around one hour to complete. But professors are sometimes wrong!^[citation missing]. If this or future problem sets are too long, please let us know, so we can adjust and plan accordingly.

Please make use of the online discussion board to share your ideas and get help.

News reporting of probabilities

Here is a headline from the Mail Online, from 5 November 2020:



Figure 1: Headline from the Mail Online: “Americans who go out to work are nearly TWICE as likely to test positive for coronavirus as people who work from home, CDC report finds”

Here is an extract from the nutshell paragraph of the same article:

- **Those who tested positive for COVID-19 were 1.8 times more likely to report going exclusively to an office or school setting**

Figure 2: Nutshell paragraph: “Those who tested positive were 1.8 times more likely to report going exclusively to an office or school setting”

(In this context, “going exclusively to an office or school setting” means not working from home at all, neither part-time nor full-time.)

- Does the statement in the nutshell paragraph justify the headline? Explain why or why not.
- Read the news attentively. Can you find examples where conditional probabilities are being reported? Are they being reported correctly?

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Updated by Dmytro Shytikov in 2024