



Image by [Jan Vašek](#) from [Pixabay](#)

# Quarterly problem

- Math edition -

## Air traffic

*No contrails, but blue sky and bright sunshine. Spring 2020 brought lots of good weather - but also curfews and travel bans. Instead of spending Easter at the beach or visiting grandma and grandpa, staycation was the order of the day. But how many planes were actually in the air in April, compared to the usual traffic?*

The measures to contain Covid-19 and the travel restrictions inevitably led to a significant decline in air traffic. Initially, flight schedules were only thinned out, but at the end of March 2020 many destinations were completely cancelled. From spring onwards, return trips home, e.g. to Germany, became more and more difficult, and in April 2020 from some countries they were only possible via the return flights of the Foreign Office.

Europe's largest airports looked like ghost towns with almost no air traffic. Numerous airlines left almost their entire fleets on the ground<sup>1</sup>. Even now, month later, air traffic is only gradually getting back on track, and travel continues to be restricted to a minimum. It will probably take quite a while before air traffic returns to normal.

**On the right you see two snapshots of air traffic over Germany, one from April 2019, the other from April 2020.**

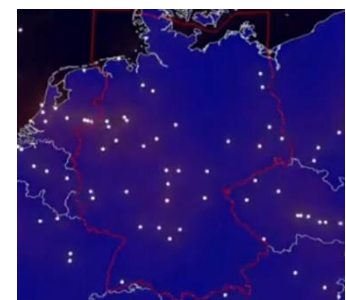
1) How many fewer flights were recorded over Germany in April 2020 compared to the previous year at this captured moment? How can you determine this as precisely as possible? Give your result in percent. What other option would you have for indicating the decline in air traffic?

2) Based on your snapshot calculations, consider how many planes were flying over Germany during **one day** in April 2019. How many were there in April 2020 in comparison?

3) Find out how many planes are currently taking off again from Frankfurt am Main in Germany every day. How many planes took off there per day before Corona?



April 2019



April 2020

Source: [https://www.instagram.com/p/B\\_2e552Khbo/](https://www.instagram.com/p/B_2e552Khbo/)

### Brainstorm-Box

The decline in air traffic had a positive impact on the environment: Less air traffic also means less air pollution. But are there also negative effects? For example, what does weather forecasting have to do with aircrafts?

### Whose Method is the most accurate?

Make sure that your approach is precise and understandable.

In addition, indicate what basis you take for your respective assessment!