Welcome to the final round of the Climate Quiz

Congratulations! You've made it to the final round of this challenge.

Watch the introductory video here

You have until October 30th to submit your entry. When submitting your answer make sure it is in a word document or as a PDF file. Three winners will be announced before November 30th.

All answers must be submitted to:
mathsweekscotland@actuaries.org.uk

Round 3

Below is a graph of the average global temperature in Celsius from 2008 to 2016. [2] Create a scatter graph with the data. Make sure to label all axes and use a sensible scale. Leave room on the x axis up to the year 2030, and room on the y axis up to 16 degrees Celsius

Year	Global Average Temperature (Celsius)
2008	14.4419
2009	14.5367
2010	14.6014
2011	14.4788
2012	14.524
2013	14.5679
2014	14.6408
2015	14.7998
2016	14.8363

Use your graph to draw a line of best fit for the data. Use your line of best fit to predict the average global temperature in 2030.

For this prediction to be a good estimate, what assumptions are you supposing will be true, which real-world factors may mean these are not reasonable assumptions to make? In 100 words (± 10%) explain which assumptions you are making and explain why these assumptions may not necessarily hold.

Considering the explanations you have given above, give an updated prediction of the average global temperature in 2030. You may also wish to find more data online to help you make your prediction - make sure it comes from a reliable source; don't forget to cite it!

Why do you think your new prediction is more accurate? Are there any more reasons why this prediction may also not be correct? Explain in 150 words (±10%).

Sources

[1]https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2005JD006548
[2] https://www.jpl.nasa.gov/edu/teach/activity/graphing-global-temperature-trends/