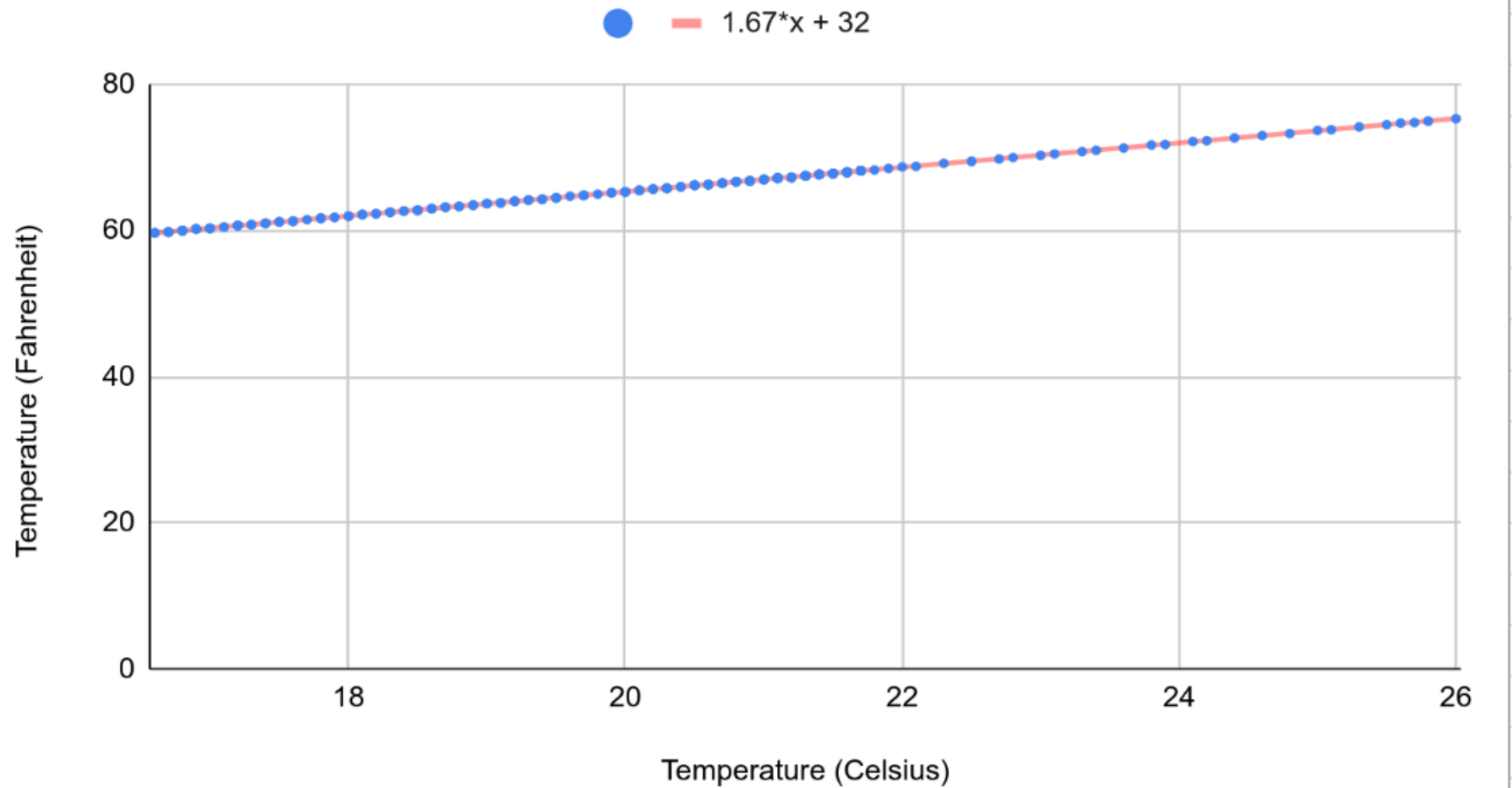


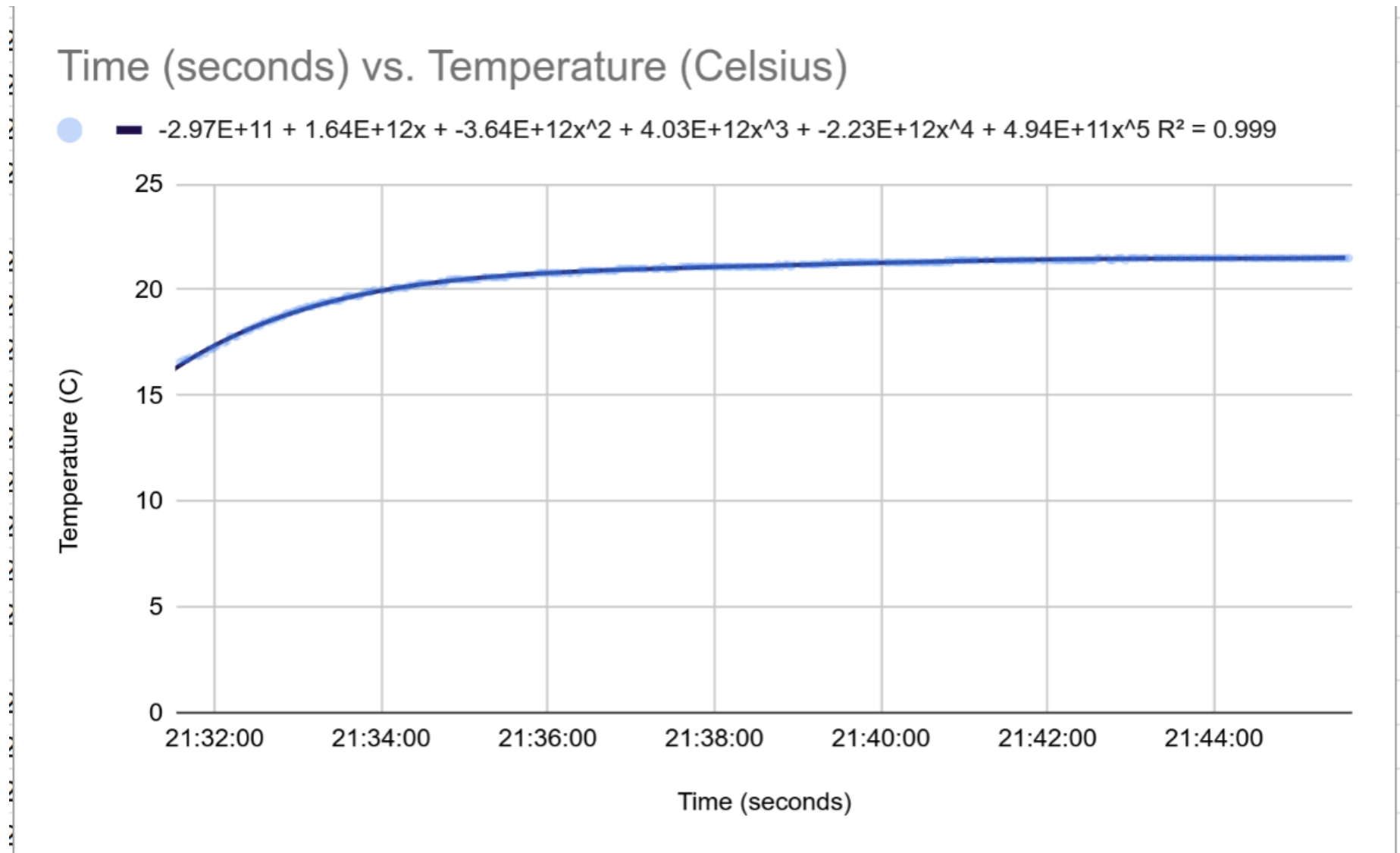
Temperature (Celsius vs. Fahrenheit)



4. First, plot celsius vs. Fahrenheit over time. Make sure to add a title and axis labels!
- What is the equation of the line of best fit?
 - Why does that make sense based on what we know about Celsius and Fahrenheit?

The equation of the line of best fit is $y = 1.67x + 32$.

The equation makes sense because it perfectly matches what we know about the conversion between Celsius and Fahrenheit. To convert from Celsius to Fahrenheit, you take $5/3$ ($1.67 \times$) of your number and then add 32, which perfectly matches the equation that models our graph.



5. Second, plot Celsius or Fahrenheit over time. Make sure to add a title and axis labels!

i. What kind of model best represents our data (linear, quadratic, exponential)?

A fifth degree polynomial model best represents our data.

ii. What is the equation of the line of best fit?

The equation of the line of best fit is $-(2.97)E11 + (1.64E)12x - (3.64E12)x^2 + (4.03E12)x^3 - (2.23E12)x^4 + (4.94E11)x^5$

Its R^2 value is 0.9999, which means the correlation coefficient R is nearly 1 and the line is quite accurate.

iii. Why does this make sense for representing temperature?

This makes sense for representing temperature because pretty much any function can be modeled by a polynomial function. (the logarithmic regression was weird.)