Problem Set 2: John Graunt
TCE 265 — Spring 2026
30 points | Due: Mon, 3/2 at 11:59pm

Name: _____
Name: _____
Name: _____

(5 pts) Part 1: The Math — Comparing the Bills of Mortality

Purpose: Analyze historical data using the tool of your choice. Discover what patterns emerge when you compare a "normal" year to a plague year.

John Graunt analyzed London's Bills of Mortality—weekly death records—and discovered patterns no one had noticed before. You'll do the same.

Your data:

- Bills of Mortality 1605-06 (link)
- Bills of Mortality 1664-65 (link)

Your tool: Choose ONE primary tool for your analysis:

- **GenAI** (Gemini, ChatGPT, Claude, or NotebookLM)
- **Desmos** (https://www.desmos.com/calculator)
- **Google Sheets**

Your deliverable: A 2-3 minute video featuring all three triad members.

Video Requirements:
Your video should include individual(s) assuming the following roles in your clip (no more than 3 minutes):

Role	Responsibility
The Questioner	Poses the driving question(s), asks follow-ups
The Demonstrator	Shares screen, shows the data/tool in action
The Synthesizer	Summarizes findings, connects to bigger picture

In addition, to receive full credit, your group video must:

- Feature all three members (faces and/or voices)
- Show the actual data comparison (1605-06 vs 1664-65)
- Demonstrate your chosen tool in action
- Use correct mathematical terminology
- Explain what the tool helped you discover
- Not exceed 3 minutes in length

Paste your video link here: _____

(10 pts) Part 2: The Story — Research via NotebookLM (10 pts)

Purpose: Use AI-assisted research to go deeper than a quick Google search. Find the human story behind the math—details that would resonate with young learners.

Create a NotebookLM notebook and add these curated sources (available in our course materials):

- John Graunt biography (Wikipedia)
- Jay Walker TEDMED transcript ("Hidden Aspects of Death")
- "John Graunt on Causes of Death" (Graunt's original analysis, 1662)
- McGill biographical sketch (GrauntEoB.pdf) - Great Plague Documentary Viewing Guide

You may add additional sources to your notebook. If you do, they should be: (a) Peer-reviewed articles, or (b) Primary sources (e.g., original historical texts), or (c) Reputable journalism (major publications), Note any sources you added in Part 2c.

(a) Key Findings (~250-300 words) (4)

What are the most important things you learned about Graunt's life, work, and impact?

(b) Surprising Quotes/Facts (3)

List 2-3 items that surprised you or would hook young learners:

(c) NotebookLM Reflection (~75-100 words) (3)

How did you use NotebookLM? What features helped? What didn't work as expected? Did you add any sources? Which ones and why?

Part 3: The Teaching — 5 Classroom Ideas (10 pts)

Purpose: Generate creative, concrete ideas for bringing Graunt and data analysis into a math classroom. Quantity over perfection—you're brainstorming, not lesson planning.

Brainstorm 5 teaching materials or experiences connecting Graunt and data analysis to grades 4-9 math. Choose **one idea from each** of the 5 categories below:

Category	Description
Data Investigation	Students analyze real, messy, or historical data to find patterns
Compare & Contrast	Side-by-side analysis of two data sets or time periods
Interactive Tech Activity	Sheets, Desmos, or AI-assisted data exploration
Cross-Curricular Link	Connects math to history, public health, or epidemiology
Discussion Prompt	Open question about what data can (and can't) tell us

For each idea: category, brief description (~50-75 words), and target grade band (4-5, 6-7, or 8-9). **(2 pts each)**

(a) Idea 1

(b) Idea 2:

(c) Idea 3:

(d) Idea 4:

(e) Idea 5:

Part 4: Reflection — Tools & Methods (5 pts)

Purpose: Reflect on your analytical process and how it compares to historical methods. Consider how you might use these tools with your future students.

(a) Poster Photo (1)

Include a photo of your completed poster from the Poster Relay. Make sure all three sticky notes (yellow, pink, green) are visible in the image.

[Insert photo here]

(b) Sticky Note Reactions (2)

Choose 2 or more sticky notes from your poster to react to. For each one:

- **Type the text** from the sticky note
- **React:** Did it surprise you? Improve your idea? Misunderstand your intent? Give you a new direction?

Sticky 1:

Sticky 2:

(c) Tool Analysis (~50-75 words) (2)

Which tool (GenAI, Desmos, or Sheets) seemed best suited for analyzing the Bills of Mortality data? Why? Which would you use with middle school students—and does order matter?