

# Benjamin Franklin's Financial Legacy

## Creative Product for a Financial Magazine or Publication

You are a reporter for a financial magazine or other publication in Boston or Philadelphia. So chose one city and create a product, like a paper, story, interview, newsletter bulletin, or special report to analyze and summarize what actually happened to Benjamin Franklin's money in your city over the 200 years that satisfies the rubric. **The challenge of this assignment is to combine the history and mathematics in a way that flows well.** You may work in a group of at most 2 people and turn in one project per group.

*In order to help you start thinking about how to flow the mathematics with the history, this sample contains the shell of a possible report. Your report does not need to look like this sample – in fact I encourage you to be creative!*

### **Choose One City: Boston or Philadelphia:**

#### **Introduction**

I would summarize Benjamin Franklin's goals and wishes for the funds.

#### **Benjamin Franklin's Fund in Boston**

I would discuss the relevant history from the news article web readings, including his life and codicil, and relate it to why the following lump sum formula is appropriate here, including where the numbers came from:

$$391000 = 4444.44 (1 + \text{rate})^{100}$$

Next, I would explain the difference between the lent rate of 5% and the average earned rate of the fund in real life, including a summary of the real-life problems the fund encountered as of 1836 from the news article web readings, and how this relates to the difference in percentages. I would then provide a detailed explanation of how we had Excel solve for the unknown rate in the formula that ended up being approximately 4.5787863% as shown in the Table below:

	A	B	C	D
1	Info	Time	Money	Average Rate
2	Boston	100 years	391000	0.045787863
3	Boston	200 years	5000000	0.039895503

Table: Excel Chart for Boston

Then I would discuss the second hundred years in Boston, including the legal battles at the end of the 1<sup>st</sup> hundred years, how the money was distributed then, and how this relates to the formula

$$5000000 = 100000 (1 + \text{rate})^{100}$$

and the average rate in D4 above. I would include the legal battles, earnings and distribution of the funds in Boston by the end of the 2<sup>nd</sup> hundred years.

#### **----OR---- Benjamin Franklin's Fund in Philadelphia**

I would use a similar format for Philadelphia as for Boston in terms of combining the history and newspaper articles with the equations from lab:

$$172350 = 4444.44 (1 + \text{rate})^{100}$$

	A	B	C	D
1	Info	Time	Money	Average Rate
4	Philadelphia	100 years	172350	0.037255968
5	Philadelphia	200 years	2256952	0.041343887

$$2256952.05 = 39274(1 + \text{rate})^{100}$$

#### **Conclusion**

As part of my conclusion, I would compare the way that the city earned and spent their money and contrast it with Benjamin Franklin's goals and wishes for the funds.