

Compound Interest Project

Mr. and Mrs. Mathematics wish to invest \$25,000 in a savings account. You and your team have been hired as a financial consultants to help them determine the best options for their savings plans. Utilizing your understanding of compound interest, you need to convince Mr. and Mrs. Mathematics of the best option for their savings.

Mr. and Mrs. Mathematics have three options available to them:

Option A: invest the money in an account earning 5.25% interest, compounded continuously

Option B: invest the money in an account earning 5.85% interest, compounded yearly

Option C: invest the money in an account earning 5.5% interest, compounded quarterly

1. Each person in the group is responsible for investigating one option. Determine who will be investing each option.
2. Determine the equation that models the amount of the investment over time for your option. (A and t should be left as variables, everything else should be filled in with a number)
3. Use your equation to fill in the t-table for the given t values for your option.
4. Use the t-table to graph your function on graph paper. All three graphs will be on the same graph, but you should each graph your own.
5. Mr. and Mrs. Exponential are hoping to save a total of \$100,000. Determine the length of time it will take them to have that amount of money using your option.
6. Out of the three options available to them, determine which option would be in Mr. and Mrs. Mathematics' best interest to invest their money in. Write a paragraph to explain your reasoning.

****Project is to be turned in at the end of Class
NO EXCEPTIONS**

NAME _____

SCORE: _____/50

Group Members: _____ and _____

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1. I am investigating option: A B C

2. Equation: _____



3. T-table

t	A
0	
2	
4	
6	
8	
10	
12	
14	
16	
18	
20	

4. Use your t-table to graph your equation on the provided sheet of graph paper. All three team members will be graphing on the same piece of graph paper. Option A should use a red crayon, option B should use a green crayon, and option C should use a purple crayon.

_____/5

5. Using the equation for your option, determine how long it will take Mr. and Mrs. Mathematics to save a total of \$100,000.

_____/10

6. Out of the three options available to them, determine which option would be in Mr. and Mrs. Mathematics' best interest to invest their money in. Write a **paragraph** to explain your reasoning. (This should be done individually, not as a group. Identical or nearly identical explanations will receive a score of 0)

_____ /20

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