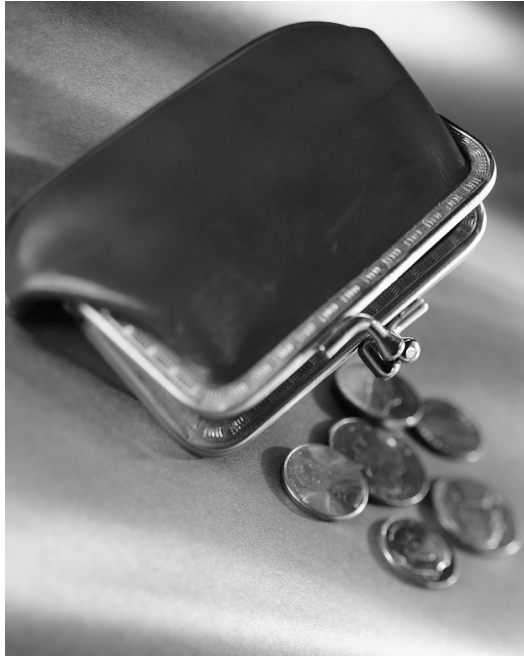

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Saving for a Rainy Day



Zara's had an eccentric and rich aunt who offered her a choice for her birthday present. Aunt Addie said, "You can have a dollar today, and I will double that amount every day for 30 days. At the end of the month the total is yours. Or, I will give you a million dollars today. I would advise you to take the one that gives you more money, and follow your uncle's saving plans."

Which offer did Zara choose? How can you figure out which is more money?

Aunt's Choice #1:

Zara starts with a dollar and it doubles every day for 30 days.

Aunt's Choice #2:

Zara starts with a \$1,000,000.

Zara's Uncle Eddy also had choices for Zara. He had several saving plans for Zara to choose from. However, she had to answer some questions correctly before she would get the corresponding amount of interest.

Uncle's Choice #1:

Zara starts with \$100,000 and puts it in savings that earn 4% interest and leaves it for 10 years.

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Uncle's Choice #2:

Zara starts with \$100,000 and puts it in savings that earn 8% interest and leaves it for 10 years.

Question:

If Zara started with \$100,000 and had the choice of earning 4% interest or 8% interest, how much more would she get with 8% interest? _____

Uncle's Choice #3:

Or, maybe Zara should start with \$10,000 this year, put it in an 8% savings account, then add \$10,000 to the account every year for 10 years.



How much more or less would she get this way? _____

Finish the chart, on the next page to answer the questions.

Name _____ Period _____ Date _____

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Day	Aunt #1 Choice, per day	Aunt #1 Choice, Cumulative	Year	Uncle Choice, start of year @4%/yr	Uncle #1 Choice, 4% Cumulative end of year	Uncle #1 Choice, start yr @8%/yr	Uncle Choice, 8% end of year Total	Uncle #2 Choice –total
1	1	1	1	100,000	104,000	100,000	108,000	10,000
2	2	3	2	104,000		108,000		20,800
3			3					
4			4					
5			5					
6			6					
7			7					
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At the end of 30 days, the aunt's #2 choice would give \$1,000,000 and #1 choice would give \$1,073,741,823. So choice #1 would give over 1000 times more money.

Looking at the Uncle's choices, Choice #2 at 8% gives more after 10 years. However, Choice # 3 is very close to Choice #1.