

Depositing the Dough



Susanna and Joe have just started new jobs. Each has a paycheck, which they decide to deposit in their local bank. They sit down with a bank manager.

“Now,” says the manager, “you each want to open an account. What kind of account do you need?”

Susanna is interested in a savings account. “That’s a great idea,” says the bank manager. “Saving is an important way to prepare for the future. And when you save your money in a bank, you earn interest. The longer your money stays in a savings account, the more money it earns.”

Susanna decides to place her money in a savings account at 3 percent APY (annual percentage yield). “So...if I put \$100 in the account, I’ll earn 3 percent of \$100, or \$3 per year. That’s good, I guess...”

“Actually,” says the banker, “it’s much better than that because you don’t just earn simple interest, which would be 3 percent of your original investment. Instead, you earn compound interest. That means we add your investment earnings to your original investment every month. The longer you leave your money in the bank, the more it earns.”

Here’s how to work out compound interest:

- Start with the simple interest you’d earn in one year. In this case, it’s 3 percent, or \$3.
- Divide that amount by 365—the number of days in the year. \$3 divided by 365 is \$.008.
- Multiply the daily interest amount by the number of days in a month (30). $$.008 \times 30 = $.24$, which is added to your account in the first month. Now your account is worth \$100.24.
- For the next month, figure your interest not on the original \$100, but on \$100.24.

Joe wants to open a checking account so that he can pay his car insurance. “What happens after I write a check?” he asks. Read on to find out!

Students: The chart below shows the differences between how simple and compound interest can increase Susanna’s initial deposit of \$100. Using what you have learned about calculating interest, fill in the empty spaces on the chart. Assume that compound interest is compounded monthly.



Years	Simple Interest	Compound Interest
1		
2		
3		
4	\$111.52	\$112.73
5	\$114.40	\$116.16
10	\$128.80	\$134.94
15	\$143.20	\$156.74
20	\$157.60	\$182.08
25	\$172.00	\$211.50



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