Name _____   Date _____
Mr. Schlansky   Algebra II

Compound Interest

1. A bank account is opened with $3000 and interest is compounded monthly at an interest rate of 4.2%. How much money is in the account after 8 years?

2. If a bank account is opened with $4000 and is compounded at a rate of 5.2% continuously, how much money will be in the account after 3 years?

3. Sal has a savings account. He opened the account 6 years ago by putting in $3000. If the interest is compounded daily at a rate of 5.6%, how much money is in the account now?

4. How much money is in a bank account opened 7.5 years ago with $3125.67 that is compounded weekly with an interest rate of 5.26%?

5. Moe opened a bank account with $3100 4 years ago at an interest rate of 6.1% that is compounded continuously. How much money is in Moe's bank account now?

6. Max opens a bank account with $2100. If interest is compounded quarterly at an interest rate of 7%, how much interest will Max have earned after 3 years?

7. Dan opened a savings account with $3300. If 4 years has passed, and interest is compounded monthly at a rate of 4.6%, how much *interest* has Dan made?

8. The table below shows three different investment options in which Lauren can invest $7,000.

Option	Annual Interest Rate	Frequency of Compounding
A	6.5%	Annually
B	6.38%	Continuously
C	6.46%	Weekly

Which option will allow Lauren to earn the most money over the course of a four-year period? Justify your answer.

9. The table below shows three different investment options in which Lauren can invest $3,200.

Option	Annual Interest Rate	Frequency of Compounding
A	4.9%	Annually
B	4.81%	Continuously
C	4.85%	Weekly

Which option will allow Lauren to earn the most money over the course of a four-year period? Justify your answer.

10. Seth's parents gave him $5000 to invest for his 16th birthday. He is considering two investment options. Option A will pay him 4.5% interest compounded annually. Option B will pay him 4.6% compounded quarterly. Write a function of option A and option B that calculates the value of each account after n years. Seth plans to use the money after he graduates from college in 6 years. Determine how much more money option B will earn than option A to the *nearest cent*.