- 1. You invest \$2000 in a bank account that has a 5% annual interest rate, compounded continuously. How much will you have in 5 years?
- 2. You invest \$1,500 in a bank account that has a 3% annual interest rate, compounded continuously. How much will you have in 15 years?
- 3. You invest \$10,000 in a CD that has a 9% annual interest rate, compounded continuously. How much will you have in 20 years?
- 4. You invest \$5000 in a bank account that has a 3.5% annual interest rate, compounded continuously. How much will you have in 12 years?
- 5. You invest \$3500 in a bank account that has a 4% annual interest rate. Calculate the amount you will have in 5 years if the interest is compounded:

a. Annually

d. Daily

b. Quarterly

e. Continuously

- c. Monthly
- 6. You live near two banks. The first offers an account with an 8% interest rate compounded annually, while the second offers an account with a 7% interest rate, compounded continuously. You have five years to collect interest. Which plan is better? (Choose any amount you want to invest, it won't matter!)
- 7. You have \$10,000 to invest in an account with a 5.25% interest rate for 5 years. How much more will you make if the interest is compounded continuously than if it is compounded annually?

## Scholarship Algebra II

**Continuous Compound Interest** 

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