

1. You have a credit card with APR of 16.5%, where interest is compounded monthly.
  - a. How much will you owe after one year, without considering late fees, on a beginning balance of \$562.30 if you do not make any additional purchases?
  - b. What is the effective annual rate for this credit card?
  - c. What is the difference between the APR and EAR for this scenario?
  - d. What is the difference in the amount owed at the end of one year using the APR as a simple interest rate versus using the effective annual rate to calculate the interest?
  
2. You are thinking about getting your first credit card. Consider the following two options.

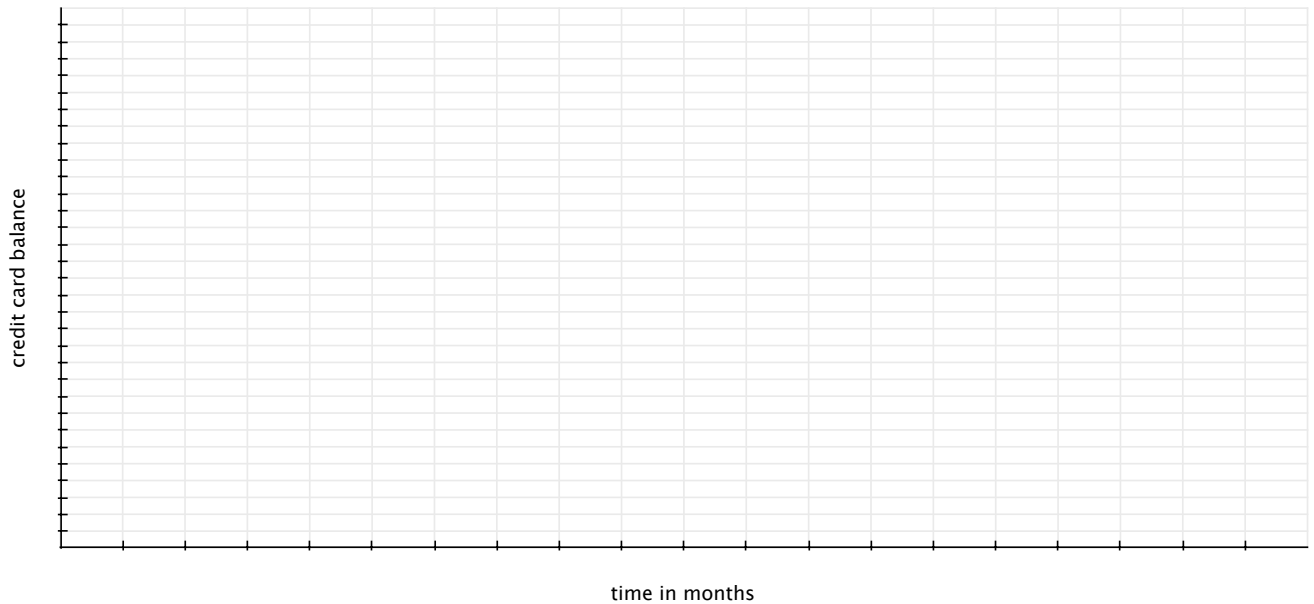
| Big Dreams Credit Card |            |
|------------------------|------------|
| APR                    | Annual Fee |
| 9.75%                  | \$50.00    |

| Adventures Student Card |            |
|-------------------------|------------|
| APR                     | Annual Fee |
| 19.8%                   | \$0        |

- a. Suppose you pay off the total balance owed each month. Which of the credit card options given is better? Why?



- b. If you had a starting balance of \$2000 at the beginning of the year, and you made no payments or additional purchases, for which credit card given above would you owe more at the end of one year? Neglect the effect of late fees.
- c. Estimate when the amounts owed for each card are equal if the starting balance is \$1400 by graphing. Draw a sketch to help you estimate below. Check your results with a graphing calculator or computer program.



- d. Which credit card option would be a better option for you personally? Explain.