

LESSON 5.1 Assignment

Name _____ Date _____

Go for the Curve!

Comparing Linear and Exponential Functions

1. Chanise just received a \$2500 bonus check from her employer. She is going to put it into an account that will earn interest. The Basic savings account at her bank earns 6% simple interest. The Gold savings account earns 4.5% compound interest.
 - a. Write a function for each account that can be used to determine the balance in the account based on the year, t . Describe each function.

b. Use your answers to part (a) to complete the table. Round the values to the nearest cent.

Quantity	Time	Basic Savings Account Balance	Gold Savings Account Balance
Units			
Expression			
	0		
	5		
	10		
	15		
	20		
	50		



- c. Graph the functions for the Basic and Gold Savings accounts on your graphing calculator. Then, sketch the graphs below.



- d. Into which account would you recommend that Chanise deposit her money? Explain your reasoning.

- e. After reading the pamphlet about the different accounts a little more closely, Chanise realizes that there is a one-time fee of \$300 for depositing her money in the Gold account. Does this change the recommendation you made in part (d)? Why or why not?

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- f. Compare the rates of change for the Basic and Gold savings accounts. Explain what the rates of change tell you about the accounts.
- g. What do the rates of change for linear and exponential functions tell you about the graphs of the functions?