NAME _____ CLASS _____ DATE _____

Math Practice

Activity 7: Calculating Interest Rates

Work through the following activity, considering concepts from the text.

Traditional savings accounts give consumers easy access to their money. However, these financial instruments typically do not offer high interest rates. Consequently, some consumers choose to save money through a certificate of deposit (CD). Certificates of deposit provide interest earnings for an investment of a predetermined period. Although the interest rate on a CD is usually higher than that of a savings account, the consumer is penalized if he or she withdraws funds from a CD before the set time has elapsed.

Consumers can purchase CDs with maturity periods that range from 30 days to five or more years. If you were to invest $1,000 in a one-year CD that paid simple interest of 5 percent, the mature CD would be worth $1,050. The table below will allow you to see how value would differ at maturity if 5 percent interest was compounded by various methods. Fill in the missing figures, rounding all numbers to the nearest cent. Note that the interest rate applied to principal will be ½ of 5 percent (0.0042) for monthly compounding, ¼ of 5 percent (0.0125) for quarterly, and ½ of 5 percent (0.025) for semi-annual.

Compounding Method

	Semi-Annual		Quarterly		Monthly	
	Principal	Interest	Principal	Interest	Principal	Interest
January	$1,000		$1,000		$1,000	$4.20
February	$1,000		$1,000		$1,004.20	
March	$1,000		$1,000	$12.50		
April	$1,000		$1,012.50			
May	$1,000					
June	$1,000	$25				
July	$1,025					
August						
September						
October						
November						
December						
MATURITY						

1. Which method provided the highest rate of return? _____

2. (**a**) Which method would you choose for a five-year CD for your $1,000 investment?

_____

(**b**) Why?

_____

3. (**a**) For what type of investment would you prefer to receive simple interest annually?

_____

(**b**) Why?

_____