| Key 8.1-2 | Name _____   Class Period _____ |

Directions: On your computer, go to www.bankrate.com. Locate the list of calculators in the middle of the screen. Click on the "Simple savings calculator" located at the bottom of the calculator list. Then complete the tables and answer the questions below each table.

1. Enter the values you see on each row below in the boxes on *Bankrate.com*. Click on calculate and record the Final Savings Balance in column 5. Use compounded annually for each calculation.

Initial Amount	Monthly Deposit	Interest Rate	Number of Years	Final Savings Balance	Amount Invested	Total Interest
$25	$10	4%	5	**$692.21**	**$625.00**	**$67.21**
$25	$25	4%	5	**$1,684.89**	**$1,525.00**	**$159.89**
$25	$50	4%	5	**$3,339.37**	**$3,025.00**	**$314.37**
$25	$100	4%	5	**$6,648.32**	**$6,025.00**	**$623.32**

2. To help analyze the table, you will need to calculate the last two columns using a calculator. First, explain the process below that you would use to calculate the Amount Invested and the Total Interest. Then check with your teacher. When your teacher approves your process, complete the last two columns.

Amount Invested = *Initial Amount + Monthly Deposit x 60 months*

Total Interest = *Final Savings Balance – Amount Invested*

3. How much interest was earned when $10 was deposited monthly for 5 years?*$67.21*

4. How much interest was earned when $100 was deposited monthly for 5 years? *$623.32*

5. What is the difference in interest earned for between the two calculations above? *$351.62*

6. What do these calculations tell you about the effect of the monthly deposit? *Sample answers: The more money you save the more interest you will earn. The more money you save the faster your savings will grow.*

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7. Now see what happens if you change the initial deposit. Enter the values you see on each row below in the boxes on *Bankrate.com*. Click on calculate and record the Final Savings Balance in column 6. Use compounded annually for each calculation.

Initial Amount	Monthly Deposit	Interest Rate	Number of Years	Final Savings Balance	Amount Invested	Total Interest
$10	$25	4%	5	$1,666.64	$1,510.00	$156.64
$25	$25	4%	5	$1,684.89	$1,525.00	$159.89
$50	$25	4%	5	$1,715.31	$1,550.00	$165.31
$100	$25	4%	5	$1,776.14	$1,600.00	$176.14

8. Use a calculator to calculate the last two columns.

9. How much more was invested with a $100 deposit versus a $10 deposit? *$90*

10. How much more interest was earned when the initial deposit increased from $10 to $100? *$19.50*

11. What does this number tell you and why do you think that is the case? *By increasing the initial deposit by $90, an additional $19.50 was earned after 5 years at 4% interest.*

12. Let's consider that you have an initial deposit of $1000 with a monthly deposit of $25 for 5 years at 4% interest rate. Predict how much more interest would be earned than having an initial deposit of $10.

    a. My prediction: *Answers will vary.*

    b. Now use the online calculator to calculate the final savings balance for an initial deposit of $1000: *$2871.13* How much interest was earned? *2871.13 – (1000 + 25 x 60) = $371.13*

    c. How much more interest was earned when the initial deposit increased from $10 to $1000? *$214.49*

    d. How did this compare to your prediction?

13. Now see what happens if you change how long you save. Enter the values you see on each row below in the boxes on *Bankrate.com*. Click on calculate and record the Final Savings Balance in column 6. Use compounded annually for each calculation.

Initial Amount	Monthly Deposit	Interest Rate	Number of Years	Final Savings Balance	Amount Invested	Total Interest
$100	$25	4%	10	$3,815.42	$3,100.00	$715.42
$100	$25	4%	20	$9,315.16	$6,100.00	$3,215.16
$100	$25	4%	30	$17,456.10	$9,100.00	$8,356.10
$100	$25	4%	40	$29,506.70	$12,100.00	$17,406.70

14. Use a calculator to calculate the last two columns.

15. Based on the totals in the last column, what effect does the length of time have on the total money saved? Explain what you found below. *Sample answer: It is possible to save a lot of money by saving a little bit of money each month. As time increases, the interest begins to grow faster.*

Cut along on dotted line.

16. Now let's see how much money you will have if you invest your monthly savings goal for 5 years. This is for your information only. Cut off this section and keep for your information.

Initial Amount	Monthly Deposit	Interest Rate	Number of Years	Final Savings Balance	Amount Invested	Total Interest
		4%	5			
		4%	10			
		4%	20			
		4%	30			
		4%	40			