**Sec. 6.4: Simple and Compound Interest**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Simple Interest: Investigation**

* Mr. Tuchtie goes to a bank with $1000 to invest for 5 years. This bank offers to pay him 5% ***simple interest*** for each year he invests his money with them. This means that they will pay 5% on the original amount invested for each year for the length of the investment.

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|  | **End of** |  |  | **Starting** |  | **Balance that** |  |  |  |  |  |  |  |
|  |  |  |  | **Interest is** |  | **Interest Earned** |  |  | **Ending Balance** |  |  |
|  | **Year** |  |  | **Balance** |  |  |  |  |  |  |
|  |  |  |  | **Calculated On** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | |  | $1000 | |  | $1000 | (1000)(.05)(1) = $50 | |  | $1050 | |  |  |
|  | |  |  | |  |  |  | |  |  |  |  |  |
| 2 | |  | $1050 | |  | $1000 | (1000)(.05)(1) = | |  |  |  |  |  |
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**Compound Interest: Investigation**

* Mr. Tuchtie goes to a bank with $1000 to invest for 5 years. This bank offers to pay him 5% ***compound interest*** for each year he invests his money with them. This means that they will pay 5% on the original amount invested, plus any earned interest for each year for the length of the investment.

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|  | **End of** |  |  | **Starting** |  | **Balance that** |  |  |  |  |  |  |  |
|  |  |  |  | **Interest is** |  | **Interest Earned** |  |  | **Ending Balance** |  |  |
|  | **Year** |  |  | **Balance** |  |  |  |  |  |  |
|  |  |  |  | **Calculated On** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | |  | $1000 | |  | $1000 | (1000)(.05)(1) = $50 | |  | $1050 | |  |  |
|  | |  |  | |  |  |  | |  |  |  |  |  |
| 2 | |  | $1050 | |  | $1050 | (1050)(.05)(1) = | |  |  |  |  |  |
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**Simple Interest vs. Compound Interest – What’s the Difference?**

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| **Simple Interest** | **Compound Interest** |
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***Example #1***: Tom invests $10,000 at a bank which offers 6% simple interest per year. HeDetermine the total ***interest earned*** and the ***total amount*** of the investment after 8 years.

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|  |  | ***Example #2***: | | | Show the growth of a $2000 investment after 6 years, at: | | | | | | | | | | | | | |  |  |  |  |
|  |  |  |  | ***a)*** 4%, ***simple interest*** annually | | | | | |  |  |  |  |  |  | b) | 4%, ***compound interest*** annually | | | | |  |
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|  | **Year** |  |  | **Interest Earned** | |  |  | **Ending** |  |  |  |  | **Year** |  |  |  | **Interest Earned** |  |  | **Ending** |  |  |
|  |  |  |  |  | **Balance** |  |  |  |  |  |  |  |  |  | **Balance** |  |  |
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