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HW \#6 Simple vs Compound Interest

1. $\$ 15,000$ is deposited in an account that pays $3.5 \%$ annual interest. Compare the amount in the account between a simple interest account and one that compounds annually. Create a graph for each situation.

## Simple

| Year | Amount |
| :---: | :---: |
| 0 |  |
| 1 |  |
| 2 |  |
| 5 |  |
| 10 |  |
| 15 |  |
| 20 |  |
| 30 |  |
| 40 |  |
| 50 |  |



## Compound

| Year | Amount |
| :---: | :---: |
| 0 |  |
| 1 |  |
| 2 |  |
| 5 |  |
| 10 |  |
| 15 |  |
| 20 |  |
| 30 |  |
| 40 |  |
| 50 |  |


2. You deposit $\$ 2000$ in an account that earns $5 \%$ annual interest. Compare the balance in the account at the end of 2 years for a simple interest account and a compound interest account, compounded monthly.
3. You deposit $\$ 30,000$ in an account that earns $5 \%$ interest, compounded weekly. Find the balance in the account at the end of 5 years, at the end of 10 years, and at the end of 20 years.
4. Your investment of $\$ 18,100$ at $13.6 \%$ compounded quarterly for 7 years and 6 months will be worth how much?
5. You gave your friend a short term 2 year loan of $\$ 43,000$ at $3 \%$ compounded annually. What will be your total return?

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