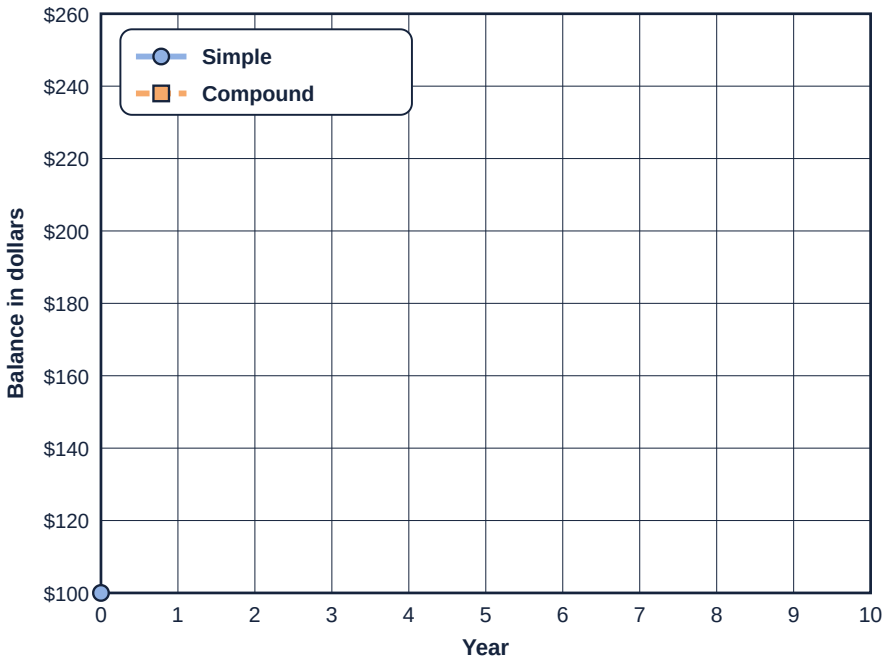
 Name _____ Date _____

# Simple interest vs compound interest: growth chart



For the student: you put $100 in two accounts that each pay 10% a year. Simple interest pays 10% of the first $100 every year. Compound interest pays 10% of everything in the account, so the interest also earns interest. Fill in the table, then plot both lines.

| Year | Simple interest balance | Compound interest balance |
|---|---|---|
| 0 | $100.00 | $100.00 |
| 1 | $110.00 | $110.00 |
| 2 | $120.00 | $121.00 |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |




1. How much interest does the simple account earn each year?

2. What are the two balances after 10 years?

3. How much more does the compound account have after 10 years?

4. In which year is the compound balance first over $200?

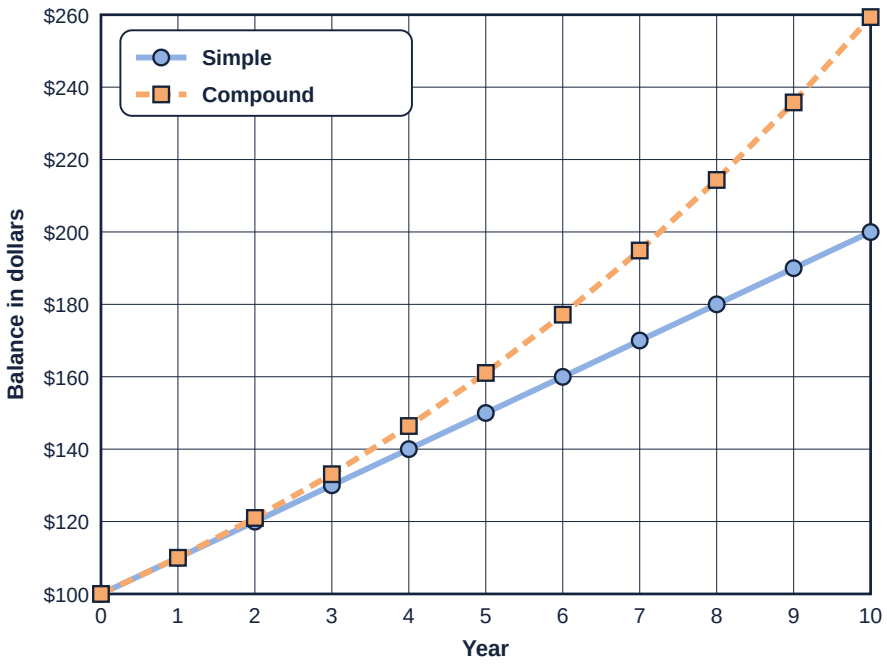
5. The rule of 72 estimates how long money takes to double: 72 ÷ the yearly rate. Use it for 10%.

10% a year is an example rate that keeps the math simple. Real savings accounts often pay less, and investments can also lose value. Balances are rounded to the cent.

 Name _____ Date _____

# Answer key: simple vs compound interest

| Year | Simple interest balance | Compound interest balance |
|---|---|---|
| 0 | $100.00 | $100.00 |
| 1 | $110.00 | $110.00 |
| 2 | $120.00 | $121.00 |
| 3 | **$130.00** | **$133.10** |
| 4 | **$140.00** | **$146.41** |
| 5 | **$150.00** | **$161.05** |
| 6 | **$160.00** | **$177.16** |
| 7 | **$170.00** | **$194.87** |
| 8 | **$180.00** | **$214.36** |
| 9 | **$190.00** | **$235.79** |
| 10 | **$200.00** | **$259.37** |




1. How much interest does the simple account earn each year?

**$10**

2. What are the two balances after 10 years?

**Simple $200.00; compound $259.37**

3. How much more does the compound account have after 10 years?

**$59.37**

4. In which year is the compound balance first over $200?

**Year 8 ($214.36)**

5. The rule of 72 estimates how long money takes to double: 72 ÷ the yearly rate. Use it for 10%.

**About 7.2 years (the table shows it doubles between years 7 and 8)**

10% a year is an example rate that keeps the math simple. Real savings accounts often pay less, and investments can also lose value. Balances are rounded to the cent.

Rule of 72: Investor.gov (U.S. Securities and Exchange Commission), compound interest calculator and glossary.