



3. If you borrow \$2,500 and need to pay \$600 in interest after 5 years, what is the annual interest rate?

4. If you invest \$2,000 at a simple interest rate of 4.5% per year and earn \$900 in interest, how long did the investment last?



5. You invest \$3,000 at an annual interest rate of 8.5% with continuous compounding for 5 years. How much money will be in the account at the end of 5 years? How much interest will you earn at the end of the investment?

6. An initial deposit grows to \$15,000 after 5 years at a 7.4% annual interest rate with continuous compounding. How much was the initial deposit, and how much interest did you earn over the 5 years?



7. A loan of \$5,000 is taken at an annual interest rate of 6.8%, compounded semi-annually. What is the total amount owed after 3 years?

8. You take out a loan of \$12,000 at a 4.5% annual interest rate, compounded quarterly, and plan to pay it off in 5 years. How much total interest will you pay over the 5 years?



9. Thomas invests \$15,000 at a 5.25% annual interest rate, compounded monthly. How long will it take for the investment to reach \$18,000?

10. Amy invests \$8,000 in a savings account that pays weekly interest. After 2 years, the investment grows to \$9,600. What is the annual interest rate?



11. Brian's credit card company charges 18% per month on any outstanding balance. Brian charged \$2,000 on his credit card and did not pay the bill for 6 months. How much will he owe after the 6 months?
12. A savings account offers an annual interest rate of 6%, compounded monthly. What is the effective annual interest rate for this account?
13. You invest in a bond that offers a 7% annual interest rate, compounded quarterly. What is the effective annual interest rate for this bond?



14. Sofia is considering three different investment accounts, each offering a different annual interest rate and compounding frequency. Which account would be the best for her investment?

- Account A: 6.0% annual interest, compounded quarterly.
- Account B: 5.8% annual interest, compounded monthly.
- Account C: 6.1% annual interest, compounded annually.



15. You currently have a balance of \$3,000 on your credit card and are considering transferring the balance to a different card. Which card would be the better option for you, based on the interest rate and compounding frequency?
- Card A: 18.1% annual interest, compounded monthly.
 - Card B: 18.0% annual interest, compounded daily.
 - Card C: 18.2% annual interest, compounded quarterly.

Which card will result in the lowest total amount of interest paid after 1 year?