

Check Your Understanding Financial Math – Simple Interest

The table below identifies some key concepts from this unit. Complete each question, check your answers, and get help as needed.

Key Concepts	Basic Questions	Intermediate Questions	Advanced Questions
Solving for C	1, 2	3, 4, 12	
Solving for other variables	5, 6, 7, 8, 9, 10	11	13
Changing Time Units		3, 4, 11, 12	13
Putting it all together			14, 15

1. Ali invests \$500 at an annual simple interest rate of 4.5%. What is the value of Ali's investment after 12 years?

2. Sebastien bought a computer worth \$1200, which depreciates a monthly simple interest rate of 1.6%. What is the value of the computer after 26 months?

3. Katelyn bought a car worth \$23 580. The value of the car depreciates at a simple interest rate of 5.4% annually. What is the value of the car after 66 months?

4. Aspen invested \$1300 in an account that gives a quarterly simple interest rate of 2.78%. What is the value of Aspen's investment after 7 years?

5. Veronica invests \$500 at a monthly simple interest rate of 0.8%. How many months will it take for Veronica's investment to be worth \$600?

6. Emma invests \$1000. After 10 years Emma has \$1800. What was the annual simple interest rate?

7. Ali bought a car 4 years ago. The car is depreciating at a rate of 6.7% annually. The car is now worth \$18,540. What was the value of the car when Ali bought it?

8. Henrique invests a certain amount of money at an annual simple interest rate of 1.7%. After 8 years, Henrique has \$1200. How much money did Henrique invest initially?

9. Omar bought a new cell phone for \$800. The value of the phone depreciates over time. After 7 months, the phone is now worth \$450. By what monthly simple interest rate did the phone depreciate?

10. The real estate market fluctuates. Over the course of many years, we would typically expect the value of a home to increase, but sometimes over shorter periods of time, the value decreases.

Simon bought a house a number of years ago. The house was valued at \$180 000. The value of the house decreased by 2.5% per year, and the house is now worth \$165 000. How long ago did Simon purchase the house?

11. Karuna invests \$8000 in an account that gives her a monthly simple interest rate. In 7 years, the value of the investment will be \$9500. What is the monthly simple interest rate?

12. David borrows \$4500 at an annual simple interest rate of 5.6%. If David repays the loan in 35 weeks, how much will David repay?

13. 18 months ago, Jon invested money in an account offering a 2.6% quarterly simple interest rate. The account is now worth \$2750. What was the amount of Jon's initial investment?

14. Jorge has \$1500 to invest for 3 years. Jorge must choose between 2 different investments.
Investment A: A monthly simple interest rate of 2%
Investment B: A daily simple interest rate of 0.5%
If Jorge wants to earn the most amount of money, which investment should be chosen?

15. Your math class has been studying financial math, and as a test the students were placed in two teams and asked to invest some money.

Team A: Invested \$3000 at a daily simple interest rate of 1.2%. The investment is now worth \$4500.

Team B: Invested \$2000 at a weekly simple interest rate of 9.3%. Team A and Team B invested their money for the same amount of time.

Which team made the better investment?

Note: Your answers may vary a little based on rounding throughout the question, but only by +/- 0.1 or so

- 1) \$770
- 2) \$700.80
- 3) \$16576.74
- 4) \$2311.92
- 5) 25 months
- 6) 8% annual simple interest rate

- 7) \$25327.87
- 8) \$1056.34
- 9) depreciates at 6.25% simple interest rate per month
- 10) 3.33 years ago
- 11) monthly simple interest rate of 0.22%
- 12) \$4668.84
- 13) \$2378.89
- 14) Investment B
- 15) Team A