Simple Interest Word Problems

Grade 8

1. Jamie wants to earn $500 in interest so she'll have enough to buy a used car. She puts $2000 into an account that earns \( \frac{3}{2}\% \) interest. How long will she need to leave her money in the account to earn $500 in interest?

2. A local bank is advertising that you can double your money in eight years if you invest with them. Suppose you have $1000 to invest. What interest rate is the bank offering?

3. Kelly plans to put her graduation money into an account and leave it there for 4 years while she goes to college. She receives $750 in graduation money that she puts it into an account that earns 4.25% interest. How much will be in Kelly's account at the end of four years?

4. Randy wants to move his savings account to a new bank that pays a better interest rate of 3.5% so that he can earn $100 in interest faster than at his old bank. If he moves $800 to the new bank, how long will it take for him to earn the $100 in interest?

5. $9600 is invested at 8% per annum for 5 years.
   (a) What is the simple interest payable?
   (b) Find the amount accruing for the investment. (ending balance)

6. Find the principal that will earn $294 in 5 years at 6% simple interest.

7. The simple interest on $12 000 invested at 8% per annum is $6 720. Calculate the number of years for which the sum was invested.

8. The simple interest on $15 000 for 9 years is $6750. Calculate the rate per cent per annum.

9. How long does it take a principal of $25,000 at a simple interest rate of 5% to become $30,000?

10. $45,000 is deposited into a savings account. Calculate the maturity value (accumulated balance) of this investment if:
    a. it earns 1.5% simple interest per month for 2 years
    b. it earns 9.4% simple interest per year for 2 years

11. Find the total amount of simple interest that is paid over a period of five years on a principal of $30,000 at a simple interest rate of 6%.

12. Calculate the total worth of an investment after six months with a principal of $10,000 at a simple interest rate of 3.5%.

13. Calculate the compound interest earned when $8 500 at 8% per annum for:
    a. 3 years
    b. 8 months

14. Which is the better investment?
    a) $1 200 at 9% simple interest per annum for 2 years.
    b) $1 200 at 8% compound interest per annum for 2 years.

15. Which is the better investment?
    a) $15,000 at 0.75% simple interest per month for 2 years.
    b) $15,000 at 0.2% compound interest per month for 2 years.