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## QUIZ - FINANCIAL APPLICATIONS OF SEQUENCES AND SERIES

1. ( $40 \%$ ) A deposit of $3000 \$$ is made at $6 \%$ p.a. Write the expression and calculate the amount of money in the account after 3 years in case:
a. (6\%) The amount is compounded annually.

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A=\square \quad(1+\quad)^{-}=
$$

b. (6\%) The amount is compounded every 4 months. $\mathrm{A}=$ $\qquad$ $(1+)^{-}=$
c. (6\%) The amount is compounded every month. $\qquad$
$\mathrm{A}=$ $(1+)^{-}=$
d. $(6 \%)$ The amount is compounded every day.
$\mathrm{A}=$ $\qquad$ $(1+)^{-}=$
e. (6\%) The amount is compounded every hour.
$\mathrm{A}=$ $\qquad$ $(1+)-=$
f. ( $10 \%$ ) The amount is compounded $x$ times a day. $f(x)=$ $\qquad$ $(1+\quad)=$
2. ( $20 \%$ ) find the interest rate applied to $1500 \$$ in a deposit if the owner has received $2000 \$$ after 3 years, compounded semiannually.
3. $(20 \%)$ Find the number of years needed for an amount of $400 \$$ to grow to $500 \$$ in a deposit of $2 \%$, compounded monthly
4. (20\%) Given that the price of a product is $8000 \$$ when it's bought and $3000 \$ 9$ years later, find the percentage in which it's depreciated every year.

