MATH 120 3.1 Simple Interest

Simple Interest Formulas (Given on the exam)

\[
\begin{align*}
I &= Prt \\
A &= P + Prt \\
A &= P(1 + rt)
\end{align*}
\]

I = interest

P = principal (present value)

r = annual interest rate in decimal form

t = time in years

A = amount after time (future value)

Examples

1. If $24000 is loaned for 4 months at 10.5% annual rate, how much interest is earned?

2. How much interest will you have to pay for a credit card balance of $1152 that is 1 month overdue, if a 13% annual rate is charged?
3. A loan of $26,000 was repaid at the end of 20 months. What size repayment check (principal and interest) was written, if an 4.3% annual rate of interest was charged?

4. A loan of $890 was repaid at the end of 18 months with a check for $915. What annual rate of interest was charged?
5. If you paid $24 to a loan company for the use of $1750 for 190 days, what annual rate of interest did they charge?

6. What is the purchase price of a 50-day T-bill with a maturity value of $1186 that earns an annual interest rate of 3.562% (Assume a 360 day year).