Instructions: Show all work. Use exact answers unless specifically asked to round. Be sure to complete all parts of each problem.

1. Find the monthly payment on a loan of $30,000 at 11.5% interest for three years.

$$N = 36$$
$$I\% = 11.5$$
$$PV = 30,000$$
$$PMT = \boxed{989.28}$$
$$FV = 0$$
$$P/y = c/y = 12$$

2. Find the total interest paid on the loan.

$$989.28 * 36 = 35614.08$$
$$- 30,000.00$$
$$\boxed{\$\ 5614.08}$$

$$I = Prt$$
$$A = P\left(1 + \frac{r}{n}\right)^{nt}$$
$$payoff = (k+1)R - u$$
$$R = \frac{P\left(\frac{r}{n}\right)}{1 - \left(\frac{n}{n+r}\right)^{nt}}$$
$$V = \frac{(1-t)R[(1+r)^n - 1]}{r}$$

$$r_{eff} = \left(1 + \frac{r}{n}\right)^n - 1$$
$$A = Pe^{rt}$$
$$u = \frac{k(k+1)}{n(n+1)}F$$
$$NAV = \frac{A-L}{N}$$
$$V = \frac{R\left[(1+r(1-t))^n - 1\right]}{r}$$

$$A = P(1 + rt)$$
$$u = kR\left(\frac{h}{100+h}\right)$$
$$h = \frac{nt\left(\frac{r}{n}\right)100}{1 - \left(1+\frac{r}{n}\right)^{-nt}} - 100$$
$$V = R\left[\frac{(1+r)^n - (1+i)^n}{r-i}\right]$$