UNIT 8 MCR 3UI Exam Review

Josh decided to buy a new vehicle for \$60000 He makes a down payment of \$5000, the rest he finances at 2.9%/a compounded biweekly for 5 years.

is annuity a) How much does he finance?

b) Determine the value of his bi-weekly payments.

$$\frac{P}{55000} = \frac{R}{R} = \frac{R}{1 - (1 + i)^{-n}}$$

$$\frac{1 = 0.029}{26}$$

$$R = \frac{S}{26}$$

$$R = \frac{P}{1}$$

$$R = \frac{P}{1 - (1 + i)^{-n}}$$

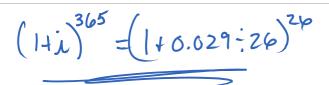
$$R = \frac{130}{1 - (1 + i)^{-n}}$$

$$R = \frac{55000 \times 0.029 \div 26}{\left[1 - (1 + 0.029 \div 26)^{-130}\right]}$$

c) What is the total interest paid? R = 454.73

$$454.73 \times 130 - 55000$$

$$= 4114.90$$



d) If the interest rate was compounded daily, but Josh still made bi-weekly payments, would he pay more or less total interest?

More interest because interest is building on the interest more frequently.

e) If the interest rate stayed at 2.9%/a compounded bi-weekly but Josh made weekly payments, would he pay more or less total interest?

Less interest since the balance is lower each time interest is calculated.