

114 8.5 p. 521 #6

a) $PV = ?$

$$R = 40$$

$$i = \frac{0.18}{12} = 0.015$$

$$n = 10$$

$$PV = 40 \left[\frac{1 - (1 + 0.015)^{-10}}{0.015} \right]$$

$$PV = \$368.89$$

$$\text{selling price} = 368.89 + 50 \text{ down payment} = \underline{\underline{\$418.89}}$$

Conclusion \therefore the selling price is \\$418.89

b) Rocco pays \$50 down payment plus \$40 for 10 months, given that he borrowed the remaining money for his purchase.

Let $I =$ Interest Paid in dollars.

$$I = (\text{total paid}) - (\text{selling price})$$

Let $A =$ total paid

$$A = 50 + 40(10) = \$450$$

$$I = 450 - 418.89 = \underline{\underline{\$31.11}}$$

Conclusion \therefore Rocco paid \\$31.11 in interest over the term of the loan.