

PBL Problem Title	BigBurger
Week Number:	4
PBL Solution	
Data	<p>Inputs: (Name: Type)</p> <p>num_burgers:integer num_chips:integer</p> <p>Outputs: (Name: Type)</p> <p>profit_chips: floating point profit_burgers: floating point total_profit: floating point</p> <p>Other: (Name: Type)</p> <p>chip_unit_profit: floating point burger_unit_profit: floating point</p> <p>Constants: (Name: Type)</p> <p>COST_CHIPS = 0.30: floating point SELL_CHIPS = 0.90: floating point COST_BURGER = 0.40: floating point SELL_BURGER = 1.50: floating point</p>
Algorithm	<p>Begin</p> <p>Output(“Please enter the number of chips sold”)</p> <p>Input (num_chips)</p> <p>Output(“Please enter the number of burgers sold”)</p> <p>Input (num_burgers)</p> <p>chip_unit_profit = SELL_CHIPS – COST_CHIPS burger_unit_profit = SELL_BURGER – COST_BURGER</p> <p>profit_chips = num_chips * chip_unit-profit profit_burgers = num_burgers * burger_unit_profit total_profit = profit_chips + profit_burgers</p> <p>Output(“Profit on chips”, profit_chips) Output(“Profit on burgers”, profit_burgers) Output(“Total Profit ”, total_profit)</p>

PBL Problem Title	Loan Calculator
Week Number:	3
PBL Solution	
Data	Constants: (Name: Type) MONTHS_IN_YEAR = 12:integer Inputs: (Name: Type) loan_amount:float annual_interest_rate:float loan_period: integer Outputs: (Name: Type) monthly_payment:float total_payment:float Other: (Name: Type) number_of_payments:integer monthly_interest_rate:float
Algorithm	Begin Input loan_amount Input annual_interest_rate Input loan_period: $\text{monthly_interest_rate} = \text{annual_interest_rate} / 100 / \text{MONTHS_IN_YEAR}$ $\text{number_of_payments} = \text{loan_period} * \text{MONTHS_IN_YEAR}$ $\text{monthly_payment} = (\text{loan_amount} * \text{monthly_interest_rate}) / (1 - (1 / (1 + \text{monthly_interest_rate}))^{*\text{number_of_payments}})$ $\text{total_payment} = \text{monthly_payment} * \text{number_of_payments}$ Output("Loan amount" loan_amount) Output("Annual Interest Rate " annual_interest_rate) Output("Loan Period (years)" loan_period) Output("Monthly payment" monthly_payment) Output("Total payment" total_payment)