PizzasOnly price calculator report

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1. Analysing the scenario and provided pseudocode

**Understanding requirements**

1. PizzasOnly needs a web application to calculate the price of pizzas that will be purchased during a promotional period as following:

* One large pizza will cost $6.45.
* wo large pizzas will cost $12.00.
* Three large pizzas will cost $14.00.
* Four or more pizzas will use a combination of the above prices to ensure the best

price for the customer. For example, the best price for five pizzas would be two

pizzas ($12.00) + three pizzas ($14.00), the best price for six pizzas would be three pizzas ($14.00) + three pizzas ($14.00).

1. The number of pizzas allowed will be entered by the PizzasOnly salesperson.
2. The client also needs some user documentation to help them use this application.
3. We do not need to develop the HTML page, because an HTML page for the price calculator web application has been provided.

Further analysing requirements:

* The input originates from keyboard
* Format of the input would be number
* Calculation of the price based on the client’s constraints
* The required output is the calculated total price

**The resigned trainee has written some pseudocode as following:**

Get the number of pizzas to order from user (input)

If number of pizzas less than or equal to zero then

Validation error

Else

Divide the number of pizzas by 2 and check the remainder

Check what option is best using the division by 2

Print the best buy option and the amount payable

Check what option is best using the division with 3

Divide the number of pizzas by 3 and check the remainder

End if

*However, this pseudocode contains some errors, including the following errors:*

1. The pseudocode is not complete.
2. It is ambiguous, because there are no comments explaining the complex operation and variables are not declared.
3. Input value has not been validated.
4. The solution is wrong, because it does not calculate the total price correctly.
5. Pseudocode

2. Improve the pseudocode by developing an algorithm that is an appropriate solution to the scenario and addresses the errors you identified.

a. Ensure that your pseudocode is free from errors, uses the correct logic and includes required calculations and expressions.

b. Your algorithm must be guaranteed to end.

c. It must also take account of all possible situations by using sequence, selection and iteration structures.

**The improved pseudocode:**

Declare input of integer

Get the number of pizzas to order from user (input)

If number of pizzas is empty then

Validation error

Else

If number of pizzas not a number, then

Validation error

Else

If number of pizzas less than or equal to zero then

Validation error

Else

If number of pizzas greater than 15 then

Validation error

Else

If promotional period is on Then

Declare the variable dividend as double

Declare the variable remainder as double

Declare the variable cost as double

Set dividend to Floor of (number of pizza (input) divided by 3)

Set remainder to number of pizza mod 3

Set cost to 0

If remainder is equal to 0 Then

            Set cost to dividend multiplied by 14.00

      Else if rem is equal to 1 Then

            Set cost to (dividend multiplied by 14.00) plus 6.45

      Else if remainder is equal to 2 Then

            cost is equal to (div multiplied by 14.00) plus 12.00

End if

Prompt “The total cost is equal to “cost

Else

Prompt “Sorry the promotion period is not on.”

End if

End if