Visual Basic Tracing Code Worksheet #1 Name -Period -

Answer the following questions based on this method.

```
' computes the cost of purchasing donuts
 Private Sub btnCompute_Click( . . . )
    ' *********************** declaration statements ******
    Dim numDonuts As Integer = 0
                          ' # of donuts purchased
                                   ' total cost of purchases
    Dim totalCost As Double = 0
    Const PRICE_PER_DONUT As Double = 0.75
                                  ' price per donut
    Const TAX RATE As Double = 1.06
                                   ' PA state sales tax
    numDonuts = Val(txtDonuts.Text)
    totalCost = numDonuts * PRICE_PER_DONUT
    lblTotalCost.Text = "$" + Str(totalCost)
 End Sub
```

- 1. If the customer types the number 2 into the textbox named txtDonuts, what will display as the final cost in the label named lblTotalCost?
- 2. If the customer types the number 5 into the textbox named txtDonuts, what will display as the final cost?
- 3. If the line of code

```
totalCost = numDonuts * PRICE_PER_DONUT
was changed to
totalCost = numDonuts * PRICE_PER_DONUT * TAX_RATE
```

and the customer types the number 2 into txtDonuts, what will display as the final cost?

- 4. Explain why the Val function must be used in the statement
- 5. Explain why the Str function must be used in the statement.
- 6. Why are constants named in all UPPERCASE letters such as PRICE PER DONUT?
- 7. Why are constants used in this program? In other words, why is the statement totalCost = numDonuts \* PRICE\_PER\_DONUT better than the statement totalCost = numDonuts \* 0.75
- 8. Why is typing out all of the statements above better than using the equivalent single line of code lblTotalCost.Text = "\$" + Str(Val(txtDonuts.Text) \* 0.75 \* 1.06)