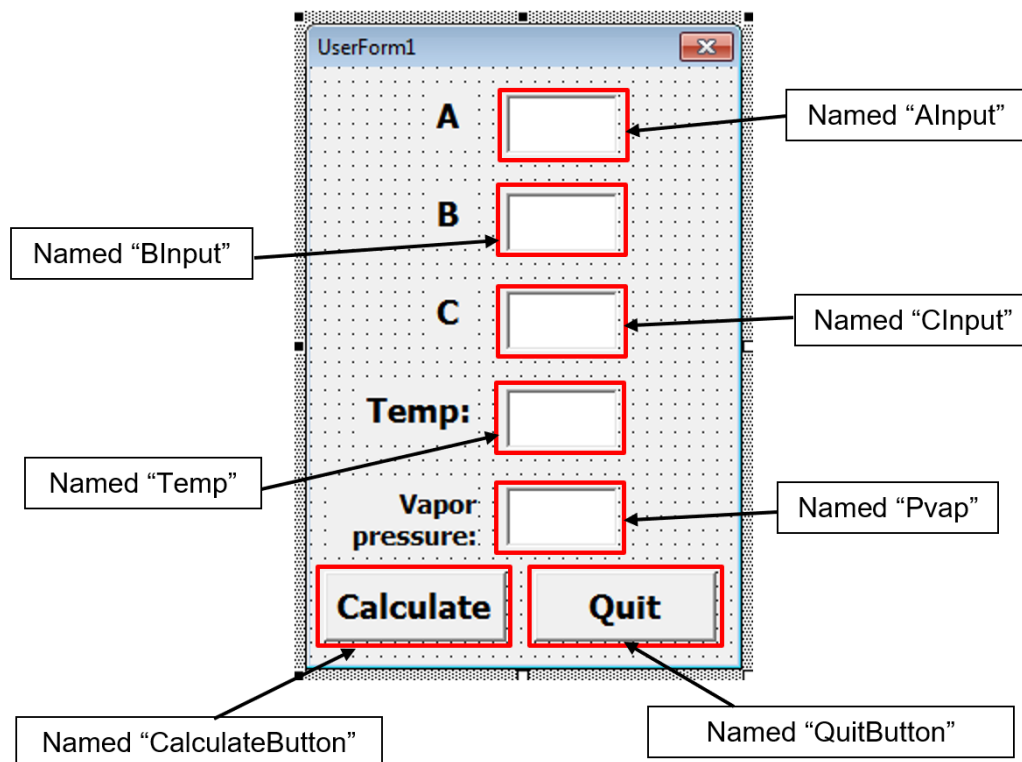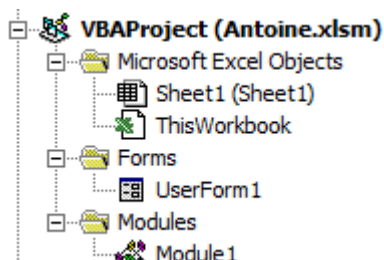# Week 4 Quiz

TOTAL POINTS 5

1.

1 point

We wish to create a user form that will enable the user to input the Antoine coefficients (A, B, and C) and the temperature (T) and the user form will calculate and display the vapor pressure. The equation for vapor pressure as a function of A, B, C, and T is:

$$P_{vap} = 10^{\left(A - \frac{B}{T+C}\right)}$$

The following user form has been created in the Visual Basic Editor. Names for each of the input fields and the two buttons have been provided to either side of the user form.

And the project window:

If we wanted to ensure that all of the **Ainput**, **Binput**, **Cinput**, **Temp**, and **Pvap** text boxes were not blank and were positive numbers, which of the following show the correct way to accomplish this input validation?

◉ Is this correct?

```
If AtLeastOneOf(Ainput, Binput, Cinput, Temp, Pvap) = "" Then
    MsgBox "At least one of the fields is blank, try again."
    Exit Sub
End If
If AtLeastOneOf(Ainput, Binput, Cinput, Temp, Pvap) < 0 Then
    MsgBox "At least one of the fields is negative, try again."
    Exit Sub
End If
```

○ Is this correct?

```
If Ainput = "" Or Binput = "" Or Cinput = "" Or Temp = "" Or Pvap = "" Then
    MsgBox "At least one of the fields is blank, try again."
    Exit Sub
End If
If Ainput > 0 Or Binput > 0 Or Cinput > 0 Or Temp > 0 Or Pvap < 0 Then
    MsgBox "At least one of the fields is negative, try again."
    Exit Sub
End If
```

○ Is this correct?

```
If Ainput = "" And Binput = "" And Cinput = "" And Temp = "" And Pvap = "" Then
    MsgBox "At least one of the fields is blank, try again."
    Exit Sub
End If
If Ainput < 0 And Binput < 0 And Cinput < 0 And Temp < 0 And Pvap < 0 Then
    MsgBox "At least one of the fields is negative, try again."
    Exit Sub
End If
```
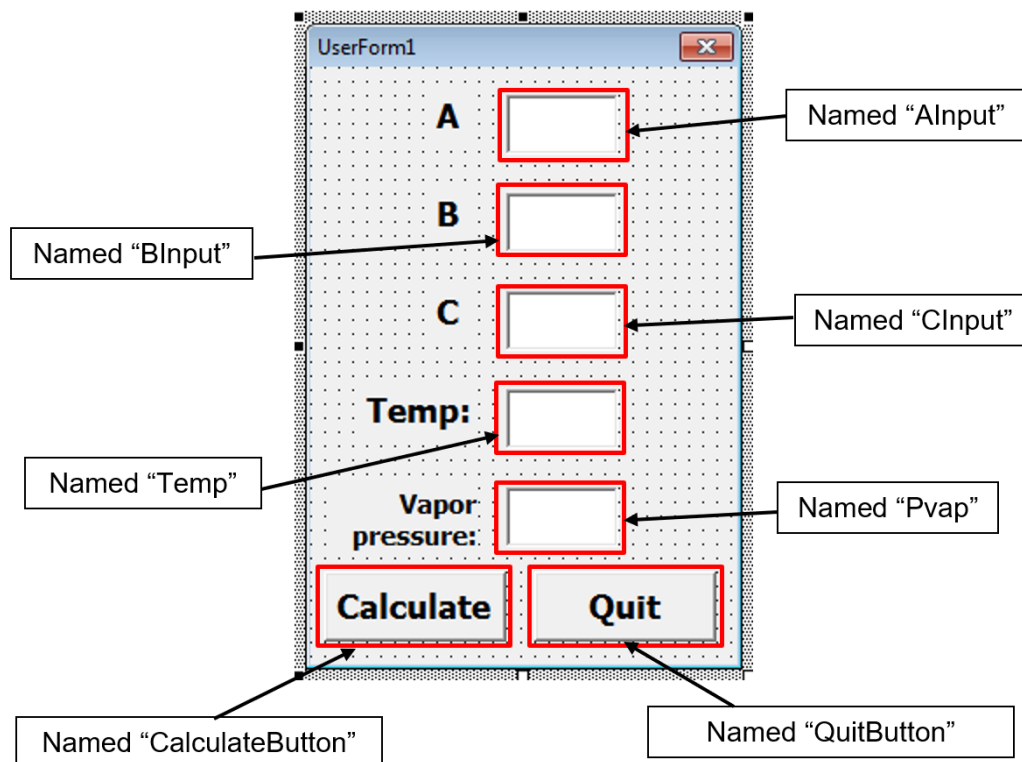
○ Is this correct?

```
If Ainput = "" Or Binput = "" Or Cinput = "" Or Temp = "" Or Pvap = "" Then
    MsgBox "At least one of the fields is blank, try again."
    Exit Sub
End If
If Ainput < 0 Or Binput < 0 Or Cinput < 0 Or Temp < 0 Or Pvap < 0 Then
    MsgBox "At least one of the fields is negative, try again."
    Exit Sub
End If
```
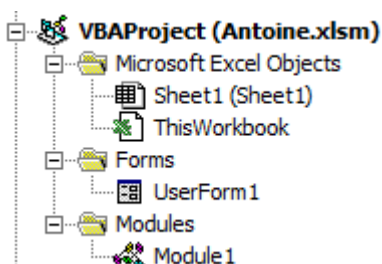
2.

1 point

We wish to create a user form that will enable the user to input the Antoine coefficients (A, B, and C) and the temperature (T) and the user form will calculate and display the vapor pressure. The equation for vapor pressure as a function of A, B, C, and T is:

$$P_{vap} = 10^{\left(A - \frac{B}{T+C}\right)}$$

The following user form has been created in the Visual Basic Editor. Names for each of the input fields and the two buttons have been provided to either side of the user form.

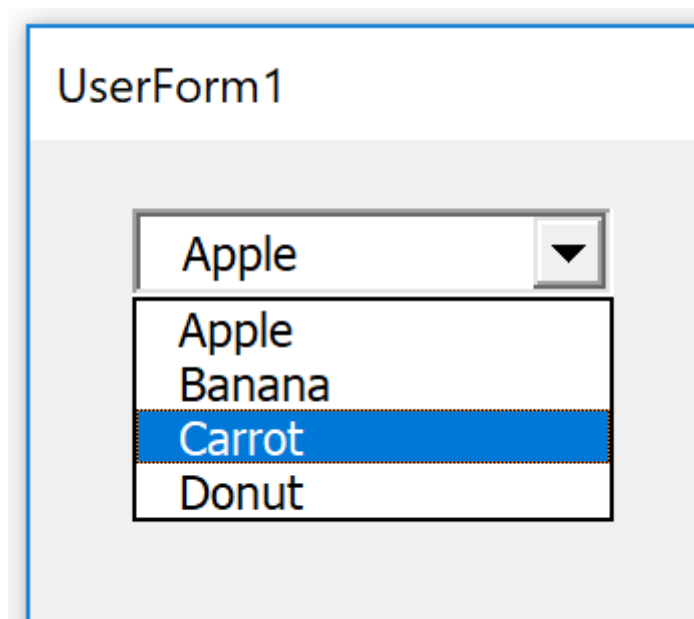
And the project window:

Which of the following options *correctly* pair the description of the code for the various task/procedure (left side of the arrow) with the location of that code (on the right side of the arrow)? Select all that apply.

☑ Code that would enable the user form to pop up automatically whenever the workbook is opened --> placed in **ThisWorkbook**

☐ Code that would enable the user form to pop up automatically whenever the workbook is opened --> placed "behind" the **Quit** button

☐ Code that would cause the user form to be unloaded --> placed in **ThisWorkbook**

☑ Code that would link an on-sheet button to cause the user form to open when the button is clicked --> placed in **Module1**

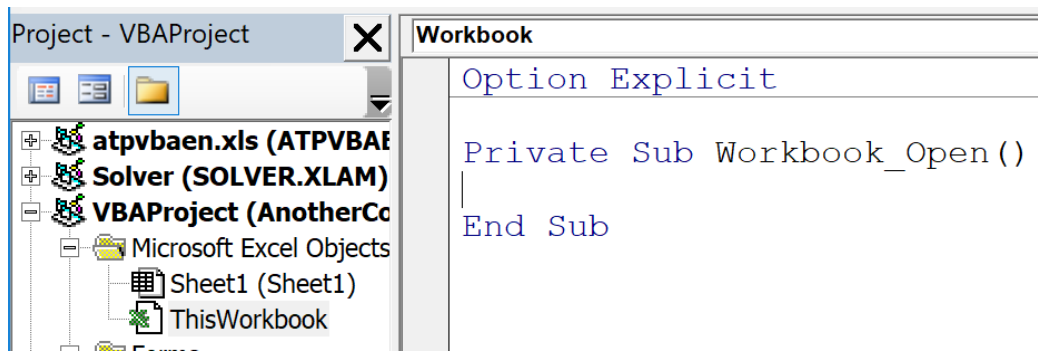☑ Code that would allow the vapor pressure calculation to be executed --> placed "behind" the **Calculate** button

3. Which of the following statements below regarding content in this module are correct? Select all that apply.

1 point

☑ The **ListIndex** for **Carrot** selected from the combo box in the user form shown will be equal to 3.
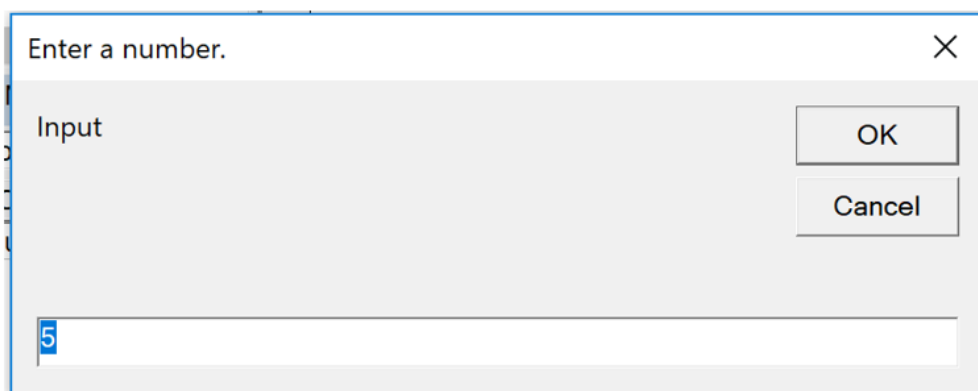
UserForm1

| Apple | ▼ |

Apple
Banana
Carrot
Donut

✅ If you wanted to run a subroutine when the workbook is opened, you would put the code for that subroutine in the **Workbook_Open** event handler behind "**ThisWorkbook**".

Project - VBAProject	✕	Workbook

```
Option Explicit

Private Sub Workbook_Open()
|
End Sub
```

- atpvbaen.xls (ATPVBAE
- Solver (SOLVER.XLAM)
- VBAProject (AnotherCo
  - Microsoft Excel Objects
    - Sheet1 (Sheet1)
    - ThisWorkbook

✅ The items in a combo box must be populated/set before the user form with that combo box is shown.

✅ An advantage of the **InputBox** method (**Application.InputBox**) over the **InputBox** function is that preliminary input validation can be performed by prudent selection of the **Type**.

✅ The code shown results in the input box displayed.

```
Sub Display()
Dim x As Double
x = InputBox("Enter a number.", "Input", 5)
End Sub
```

Enter a number.	✕
Input	OK
	Cancel
5	

4. The **PopulateComboBox** subroutine shown below uses data from the spreadsheet that follows to populate **ComboBox1** and **ComboBox2** of **UserForm2**.

(1 point)

```
Option Explicit
```

```
Sub PopulateComboBox()
Dim i As Integer, j As Integer
For i = 2 To 7
    UserForm2.ComboBox1.AddItem Range("A" & i)
Next i
UserForm2.ComboBox1.Text = Range("A2")
For j = 1 To 3
    UserForm2.ComboBox2.AddItem Range("B1:D1").Cells(1, j)
Next j
UserForm2.ComboBox2.Text = Range("B1")
UserForm2.Show
End Sub
```

	A	B	C	D
1		Charlie	Dana	Max
2	Pizza	3	9	10
3	Coca Cola	4	8	-7
4	Beer	5	7	13
5	Burritos	3	1	-1
6	Gummy Worms	6	-4	5
7	Rock Star Energy Drink	-7	4	6

The **PopulateComboBox** subroutine is run and the user selects the following for the two combo boxes and then clicks **GO**:

UserForm2 ✕

Coca Cola ▼   Max ▼

GO   QUIT

The code "behind" the **GO** button is:

```
Option Explicit

Private Sub GoButton_Click()
Range("C3").Select
MsgBox ActiveCell.Offset(UserForm2.ComboBox1.ListIndex + 3, _
    UserForm2.ComboBox2.ListIndex - 1)
End Sub
```
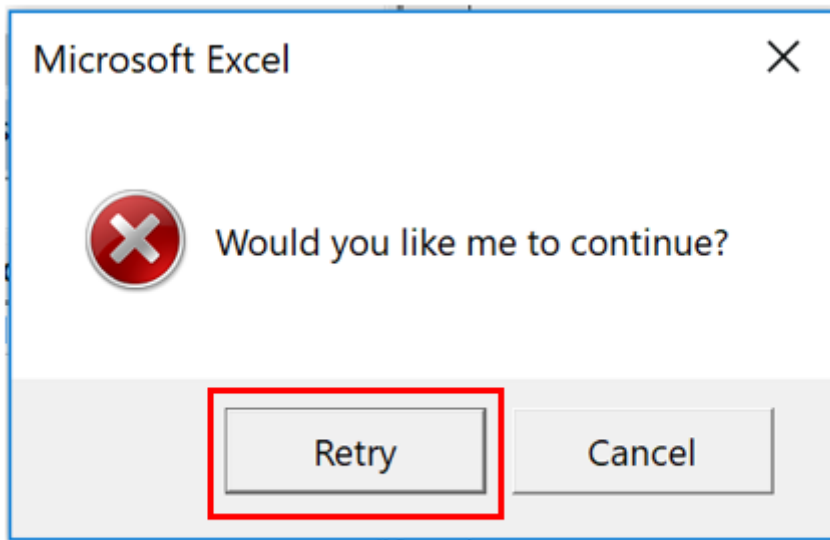
What value (will be an integer) will be displayed in the message box when

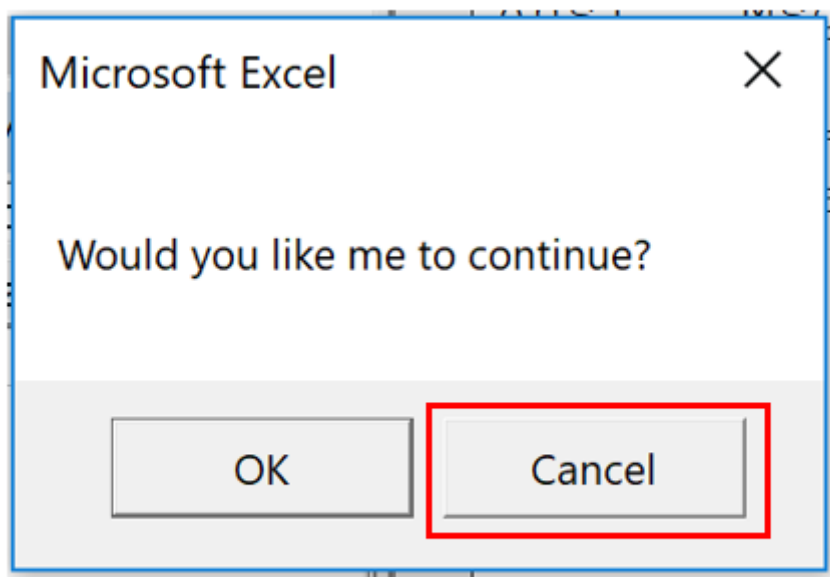What value (will be an integer) will be displayed in the message box when the **GO**button above is pressed?

5. The **Display** subroutine is executed and the result (when **Retry** is clicked on the first message box and **Cancel** clicked on the second message box) is shown here:
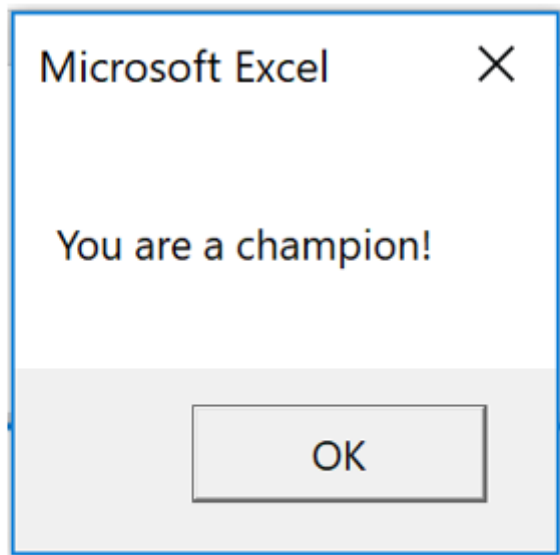
Microsoft Excel	✕
❌ Would you like me to continue?	
Retry	Cancel

Retry button clicked

Microsoft Excel	✕
Would you like me to continue?	
OK	Cancel

Cancel button clicked

```
Microsoft Excel                    ×

You are a champion!

                    OK
```

The button codes and return values for the **MsgBox** function are shown here:

button codes		MsgBox Return Value	
vbOKOnly	0	vbOK	1
vbOKCancel	1	vbCancel	2
vbAbortRetryIgnore	2	vbAbort	3
vbYesNoCancel	3	vbRetry	4
vbYesNo	4	vbIgnore	5
vbRetryCancel	5	vbYes	6
vbCritical	16	vbNo	7
vbQuestion	32		

Which of the following options correctly shows the code for the **Display** subroutine? (HINT: The X shown in the first message box means it is a Critical output.)

◉ Is this correct?

```
Sub Display()
Dim Ans1 As Integer, Ans2 As Integer
Ans1 = MsgBox("Would you like me to continue?", 3)
If Ans1 = 4 Then
    MsgBox "You are a champion!"
End If
End Sub
```

○ Is this correct?

```
Sub Display()
Dim Ans1 As Integer, Ans2 As Integer
Ans1 = MsgBox("Would you like me to continue?", 5)
If Ans1 = 2 Then
    Ans2 = MsgBox("Would you like me to continue?", 1)
    If Ans2 = 2 Then MsgBox "You are a champion!"
End If
End Sub
```

○ Is this correct?

```
Sub Display()
Dim Ans1 As Integer, Ans2 As Integer
Ans1 = MsgBox("Would you like me to continue?", 21)
If Ans1 = 6 Then
    MsgBox "You are a champion!"
End If
End Sub
```

○ Is this correct?

```
Sub Display()
Dim Ans1 As Integer, Ans2 As Integer
Ans1 = MsgBox("Would you like me to continue?", 21)
If Ans1 = 4 Then
    Ans2 = MsgBox("Would you like me to continue?", 1)
    If Ans2 = 2 Then MsgBox "You are a champion!"
End If
End Sub
```

○ Is this correct?

```
Sub Display()
Dim Ans1 As Integer, Ans2 As Integer
Ans1 = MsgBox("Would you like me to continue?", 21)
If Ans1 = 4 Then MsgBox "You are a champion!"
Ans2 = MsgBox("Would you like me to continue?", 1)
If Ans2 = 2 Then
    MsgBox ("Would you like me to continue?")
End If
End Sub
```

☐ I, **JAY PATEL**, understand that submitting work that isn't my own may result in permanent failure of this

course or deactivation of my Coursera account.

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