MicroTest 4 **Name: _____**

Part A – 10 points

Circle each correct answer.

1) A subprogram (function or procedure) is the definition of a set steps to be executed whenever the subprogram is called. True / False

2) When a function is called, the names used for the parameters passed must be the same as the names used in the function definition. True / False

3) By default, the parameters of a function are specified as `ByVal`. True / False

4) A function (call) can be used where ever a variable may be used (to the right of an assignment operator) because the function (call) essentially represents a value, the result from the function. True / False

5) A **`Sub`** subprogram may not assign new values to global variables. True / False

6) A control object may not be passed as a parameter to a function subprogram. True / False

7) The code that implements a function may not call another **`function`** or **`Sub`**. True / False

8) A formal argument that is declared **`ByVal`** may not be assigned a new value within the subprogram. True / False

9) A subprogram that has a **`ByRef`** formal argument may not be called with an explicit value as the corresponding actual argument.
e.g. **`Call aSub(4.5)`** is not valid if the subprogram header is **`Private Sub aSub (ByRef x As Double)`** True / False

10) If a subprogram includes a declaration of a local variable that has the same name as a global variable, then that global variable may have been assigned a new value when the subprogram has finished executing. True / False

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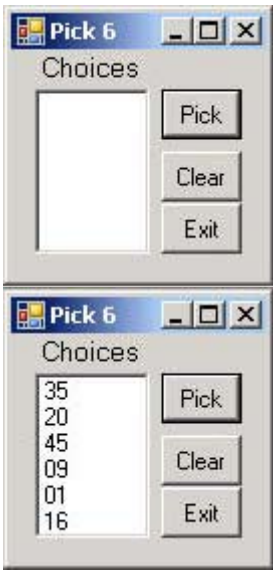
Part B [10 points]

The graphic to the right shows the interface for a VB project that randomly selects lottery numbers. Each of the numbers must be in the range 1 to 49 inclusive, and may occur only once.



Notice that all numbers have exactly 2 digits. Numbers less than 10 are padded with a leading '0'.

You need to create a subprogram that receives a number and returns the same number in 2-digit form.

You should NOT use any of VB's built-in subprograms.

1 mark
½ mark

Write the subprogram here:

```
' Declare the subprogram
    Private Function twoDigit(ByVal x As Integer) As String

' Declare a variable for the result

        Dim temp As String

' Cast the input into the result
        temp = CStr(x)

' Pad it when necessary
        If Len(temp) < 2 Then

            temp = "0" & temp

        End If

        Return temp

    End Function
```