Question

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Best way to compare two arrays for "equality" (same subscripts and values)

I've been trying to write a method to compare two local variables, which may be arrays, for "equality" - that is, to see if they have all the same subscripts (if they're arrays) and values. This is the best I've come up with so far - are there any better/simpler approaches out there?

```
/// Returns true if arrays <var>first</var> and <var>second</var> have all the same s
ubscripts and all
/// the same values at those subscripts. <br />
/// If <var>first</var> and <var>second</var> both happen to be either undefined or u
nsubscripted variables,
/// returns true if they're both undefined or have the same value.<br />
/// <var>pMessage</var> has details of the first difference found, if any.
Method CompareArrays(ByRef first, ByRef second, Output pMessage) As %Boolean [ Proced
ureBlock = 0 ]
{
    New tEqual,tRef1,tRef2,tRef1Data,tRef1Value,tRef2Data,tRef2Value

    Set pMessage = ""
    Set tEqual = 1
    Set tRef1 = "first"
    Set tRef2 = "second"
    While (tRef1 '= "") || (tRef2 '= "") {
        #; See if the subscript is the same for both arrays.
        #; If not, one of them has a subscript the other doesn't, and they're not equ
al.
        If ($Piece(tRef1,"first",2) '= $Piece(tRef2,"second",2)) {
            Set tEqual = 0
            Set pMessage = "Different subscripts encountered by $Query: "_
                $Case(tRef1,"":"<end>",:tRef1)_"; "_$Case(tRef2,"":"<end>",:tRef2)
            Quit
        }

        Kill tRef1Value,tRef2Value
        Set tRef1Data = $Data(@tRef1,tRef1Value)
        Set tRef2Data = $Data(@tRef2,tRef2Value)
        #; See if the $Data values are the same for the two.
        #; This is really only useful to detect if one of the arrays is undefined on
the first pass;
        #; $Query only returns subscripts with data.
        #; This will catch only one being defined, or one being an array and
        #; ?the other being a regular variable.
        If (tRef1Data '= tRef2Data) {
            Set tEqual = 0
            Set pMessage = "$Data("_tRef1_")="_tRef1Data_"; $Data("_tRef2_")="_tRef2D
ata
            Quit
        } ElseIf (tRef1Data#2) && (tRef2Data#2) {
```

```
            #; See if the value at the subscript is the same for both arrays.
            #; If not, they're not equal.
            If (tRef1Value '= tRef2Value) {
                Set tEqual = 0
                Set pMessage = tRef1_"="_@tRef1_"; "_tRef2_"="_@tRef2
                Quit
            }
        }

        Set tRef1 = $Query(@tRef1)
        Set tRef2 = $Query(@tRef2)
    }
    Quit tEqual
}
```

#Code Snippet #ObjectScript #Caché