

```
$aref2 = $aref1;
```

You get two references to the same array. If you modify `$aref1->[23]` and then look at `$aref2->[23]` you'll see the change.

To copy the array, use

```
$aref2 = [ @{$aref1} ];
```

This uses `[...]` notation to create a new anonymous array, and `$aref2` is assigned a reference to the new array. The new array is initialized with the contents of the array referred to by `$aref1`.

Similarly, to copy an anonymous hash, you can use

```
$href2 = { %{$href1} };
```

- To see if a variable contains a reference, use the `ref` function. It returns true if its argument is a reference. Actually it's a little better than that: It returns `HASH` for hash references and `ARRAY` for array references.
- If you try to use a reference like a string, you get strings like

```
ARRAY(0x80f5dec)    or    HASH(0x826afc0)
```

If you ever see a string that looks like this, you'll know you printed out a reference by mistake.

A side effect of this representation is that you can use `eq` to see if two references refer to the same thing. (But you should usually use `==` instead because it's much faster.)

- You can use a string as if it were a reference. If you use the string `"foo"` as an array reference, it's taken to be a reference to the array `@foo`. This is called a *soft reference* or *symbolic reference*. The declaration `use strict 'refs'` disables this feature, which can cause all sorts of trouble if you use it by accident.

You might prefer to go on to *perllool* instead of *perlref*; it discusses lists of lists and multidimensional arrays in detail. After that, you should move on to *perldsc*; it's a Data Structure Cookbook that shows recipes for using and printing out arrays of hashes, hashes of arrays, and other kinds of data.

## 3.7 Summary

Everyone needs compound data structures, and in Perl the way you get them is with references. There are four important rules for managing references: Two for making references and two for using them. Once you know these rules you can do most of the important things you need to do with references.

## 3.8 Credits

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