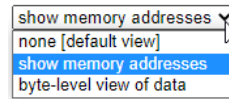# Pointer Assignment

It is also possible to assign new values to the pointer variables themselves. Look at this animation. Before you do, change the drop-down list so that it says "show memory addresses".

Line 6 makes a copy of the ==**direct value**== (that is the address) stored in **p2** and copies it into the variable **p1**. Afterwards, both variables now point to the same location.

If you draw your diagrams using arrows, keep in mind that copying a pointer replaces the destination pointer with a new arrow that points to the same location as the old one. Thus **p1** = **p2** changes the arrow leading from **p1** so it points to the same location as the arrow originating from **p2**.

> *It is important to distinguish the assignment of a pointer from that of a value. **Pointer assignment**, p1 = p2, makes **p1** and **p2** point to the same location. By contrast, **value assignment**, *p1 = *p2, copies the value from the location pointed to by **p2** into the location pointed to by **p1**.*